Americas Technology: Internet

Initiation: US Large Cap Internet: Framing Industry Growth, Margin Dynamics & Risk/Reward

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We initiate on the US Internet sector (17 companies) with a selectively positive view. We still see opportunities for investors to capture a mixture of growth, margin/free cash flow (FCF) dynamics and capital allocation decisions that are increasingly equity value accretive. In our view, the industry still has ample opportunities for secular revenue growth & increased operating efficiencies on the back of building scale in the coming years. That being said, we are not uniformly bullish given the fact that many companies either have forward growth more than priced into their equity at current levels, in our view, and/or we see a more neutral/negative risk/reward in a handful of names based on our operating estimates reflecting a mixture of growth and margin dynamics in the coming years. Over the near term (2H21), we still see broadly constructive environment in specific sub-sectors that supports our forward operating estimates being inline to ahead of Street in Q3 & Q4 '21 (w/ the most pronounced upside, in our view, being in digital advertising).

In this initiation, we introduce the Goldman Sachs Internet Investing Framework, a mixture of quantitative and qualitative factors to measure a company's prospects for growth, economic returns, capital allocation, potential headwinds & current stock market sentiment/positioning. Our Buy ratings are reflective of companies where the market is still under-appreciating the prospects for long-term compounded growth and/or longer-term operating margin structures as reflected in current valuation. In addition, our operating estimates broadly sit above Street ests. for these companies over the next 12-24 months (rev and/or operating margins). Our Buy ratings are: Amazon (AMZN, $4,250 PT, 2.2:1 upside/downside skew), Facebook (FB, $455 PT, 1.6:1 skew), Alphabet (GOOGL, $3,350 PT, 1.9:1 skew), Snap (SNAP, $90 PT, 1.7:1 skew), Uber (UBER, $64 PT, 3.1:1 skew), Lyft (LYFT, $64 PT, 2:1 skew) & Expedia (EXPE, $185 PT, 1.7:1 skew). Our Sell ratings are a function of a more negative risk/reward skew on these companies' shares from current levels as reflected in our expectation for operating estimates (where we are broadly below Street estimates on rev and/or operating margins) & valuation already reflecting a fairly robust medium/long term prospect vs our industry work. These ratings are based on a relative risk/reward framework measured against our broader coverage universe and aren't indicative of mgmt or operating business "quality". Our Sell ratings are: Airbnb (ABNB, $132 PT, 1:1.9 upside/downside skew) & Twitter (TWTR, $60 PT, 1:1.5 skew).

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Executive Summary

We initiate on the US Internet sector (17 companies) with a selectively positive view. Despite a bull market dating back to 2009 (NASDAQ ~20% compounded annual return from March 1st, 2009) and very strong performance for most of the sector from March 2020 lows (NASDAQ +112% from April 1st 2020), we still see opportunities for investors to capture a mixture of growth, margin/free cash flow (FCF) dynamics and capital allocation decisions that are increasingly equity value accretive. We see the industry as having ample opportunities for secular revenue growth (well above GDP as end demand markets continue to shift from offline to online) and increased operating efficiencies on the back of building scale in the coming years. As a result, our ratings distribution is less indicative of management or operating business "quality" & more a reflection of a combination of stock performance, valuation, operating estimate expectations and relative risk/reward as measured by upside/downside skew. We are not uniformly bullish given the fact that many companies either have forward growth more than priced into their equity at current levels in our view and/or we see a more neutral/negative risk/reward in a handful of names based on our operating estimates reflecting a mixture of growth and margin dynamics in the coming years.

Our Buy ratings are reflective of companies where the market is still under-appreciating the prospects for long-term compounded growth and/or longer-term operating margin structures as reflected in current valuation. In addition, our operating estimates broadly sit above consensus estimates for these companies over the next 12-24 months (revenue and/or operating margins). Our Buy ratings are: Amazon (AMZN, $4,250 PT, 2.2:1 upside/downside skew), Facebook (FB, $455 PT, 1.6:1 skew), Alphabet (GOOGL, $3,350 PT, 1.9:1 skew), Snap (SNAP, $90 PT, 1.7:1 skew), Uber (UBER, $64 PT, 3.1:1 skew), Lyft (LYFT, $64 PT, 2:1 skew) & Expedia (EXPE, $185 PT, 1.7:1 skew).

Our Sell ratings are a function of a more negative risk/reward skew on these companies' shares from current levels as reflected in our expectation for operating estimates (where we are broadly below consensus estimates on revenue and/or operating margins) and valuation already reflecting a fairly robust medium/long term prospect vs our industry work. These ratings are based on a relative risk/reward framework measured against our broader coverage universe and are not indicative of management or operating business "quality". Our Sell ratings are: Airbnb (ABNB, $132 PT, 1:1.9 upside/downside skew) & Twitter (TWTR, $60 PT, 1:1.5 skew).

Goldman Sachs Internet Investing Framework

In this initiation, we introduce the Goldman Sachs Internet Investing Framework. The Framework is a mixture of quantitative and qualitative factors that are meant to measure a company's prospects for growth, economic returns, capital allocation, potential headwinds and current stock market sentiment/positioning. Our ten factors in the Framework are rooted around a few key themes important to Internet investing - a) growth (addressable market, penetration curve, revenue growth); b) focus on market share dynamics of both online/offline competitors; c) unit economics and a long-term margin dynamic at maturity; d) a mgmt focus on allocating opex/capex to growth opportunity; & e) market dynamic (in the form of estimates, sentiment, stock performance). The companies that screen the most positive based on the Framework include: AMZN, EXPE, FB, GOOGL, SNAP, LYFT and UBER.

Exhibit 1: GS Ten Factor Investment Framework for US Internet

GS Ten Factor Investment Framework for US Internet

Growth & Market Share	
1) Total Addressable Market (TAM) & Revenue Growth	• Industry or sub-sector total addressable market opportunity as end demand market moves online • Level of revenue growth relative to industry peers and global GDP
2) Market Share Dynamics	• Gaining/Losing Market Share Within Its Core Business • Company's take rate / revenue economics • Overall competitive intensity
Unit Economics & Margins	
3) Unit Economics & Margins	• Gross & operating profit margins relative to industry or sub-sector • Cadence to margin forecasting as an indicator of business moat • Pricing Power
Optionality & Capital Returns	
4) Optionality & Innovation	• Exposure to any upside optionality that could open up new product or business segments • Hiring & Investing Trends As Indicative of Intensity
5) Capital Deployment & RoI	• Generation of FCF & Return on Invested Capital Forecasting • Actions to unlock equity value from current levels • Capital Returns
Outside Factors	
6) Regulation	• Exposure to global regulatory attention/scrutiny • How factored into current forward multiples is such exposure?
7) ESG	• Corporate governance & voting structure • Broader company impacts to environmental and social factors
Estimates & Market Dynamics	
8) Stock Trading Dynamics	• Current risk/reward based on earnings estimates, investor sentiment and/or technical analysis
9) GS Estimates vs. Street	• Potential for upside/downside surprise of operating results vs. consensus estimates • Potential for earnings revision cycle & resulting impact on stock performance
10) Current Valuation vs. Historical Trends	• Current valuation compared to both company's & industry comp group's historical trends • Potential for mean reversion/convergence of multiples to industry averages or expectations for premium/discount to persist

Source: Goldman Sachs Global Investment Research

10 Industry Themes for 2021 & Beyond

In addition to our broader Industry analysis and the GS Internet Investing Framework, we also frame our Top 10 Investor Debates/Themes for the sector over the next 12-24 months. The themes cut across companies and sub-sectors to highlight areas relating to industry growth drivers, future margin potential (reflected in scale benefits & competitive intensity) and potential risk factors that might act as headwinds. We will look to revisit many of these themes in more depth as we see them as critical to understand the industry shifts ahead.

Exhibit 2: Top 10 Themes for US Internet

	Theme	Most Exposed
1	Line Between Commerce & Advertising Is Blurring	AMZN, FB, GOOGL, PINS, SNAP
2	The Rise of the Creator Economy	FB, GOOGL, PINS, SNAP
3	Streaming Media Platforms Reach Global Scale But Content Cost Questions Remain	AMZN, NFLX, SPOT
4	The Shift of Local Commerce Activity Online (Via Mobile) Drives Growth & Investment Across Verticals	AMZN, UBER, DASH, LYFT
5	Subscriptions Becoming the Hallmark of Consumer & Platform Utility But Consumer Fatigue Remains Open-Ended	AMZN, NFLX, SPOT
6	The Growth & Competitive Landscape for Cloud Computing	AMZN, GOOGL
7	The Next Computing Wave Is Likely Augmented Reality – Here Comes the Metaverse	FB, SNAP
8	Online Travel Becomes More Personalized With Scaled Local Offerings Post-Pandemic	EXPE, BKNG, ABNB
9	Regulation Impacts Costs In Coming Years; Scaled Players Better Positioned To Absorb Impact	FB, GOOGL, AMZN
10	Watch for The Rise of the Decentralized Web	Large Established Players

Source: Goldman Sachs Global Investment Research

Framing The Current Landscape

The most interesting industry theme has been a demonstrable shift in consumer/enterprise behavior due to the 2020/2021 COVID-19 restrictions, including rising eCommerce, streaming media & food delivery, volatile digital ad and cloud computing trends & headwinds to travel/ridesharing. In the coming quarters, we expect the idiosyncratic behavior of covered companies to remain volatile depending on exposure to the mix of tough/easy year-over-year comps and the levels of permanent normalized behavior (impacting growth, margin structure, & penetration curves).

In terms of fundamental analysis, we analyzed a mixture of short-term operating trends and long-term industry secular themes across an array of industry contacts and channel checks. Over the near-term (Q3 & Q4 2021), we still see broadly constructive environments in specific sub-sectors (driven by consumer and enterprise behavior) that supports our forward operating estimates being inline to ahead of consensus estimates in 2H 2021 (with the most pronounced upside, in our view, being in digital advertising revenue trends aligned with back to school and holiday shopping). Our work is reflected in forward estimates as a mix of headwinds and/or slowing growth for many companies that exceeded growth expectations on the back of COVID-19 stay-at-home restrictions (eCommerce, streaming media, food delivery). Our work continues to point to a volatile re-opening dynamic (travel, ridesharing) but we find many of these companies' consensus estimates factor in relatively muted recovery trends.

What is working in the industry's favor from current levels?

- Forward growth rate trends remain well above global GDP
- Interest rates should stay generally low in coming years (incentivizing investor risk appetites for equities) per GS Macro team;
- Valuation (especially for large/mega caps) is relatively appealing when measured against 2-3 year forward growth CAGRs;

- COVID-19-driven shifts in behavior (both for consumer and enterprises) should somewhat sustain as a "new normal" after a multi-year pull-forward in digital penetration curves within multiple subsectors;
- Scaled companies (or those soon to hit scale) should have a stable to rising margin profile in the coming years; &
- Capital allocation strategies are gradually shifting from historically stock piling cash and R&D driven M&A to become more shareholder friendly (with buybacks/dividends rising).

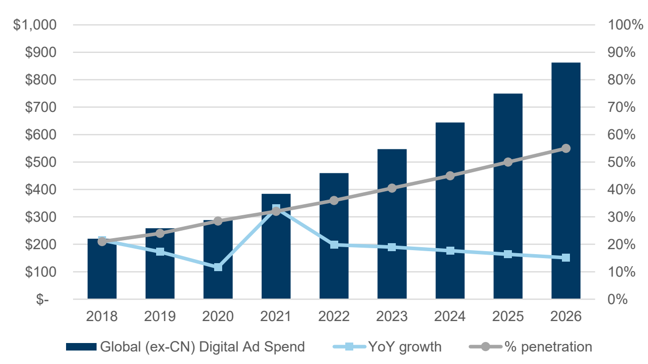
What is working against the industry from current levels?

- Heightened regulatory scrutiny will likely not abate over the medium-term;
- Growth is slowing as Web 2.0 matures;
- Strategic M&A (which has long been an industry lever to pivot and expand) is unlikely for the large/mega caps companies given the current regulatory environment;
- Industry cost inputs (marketing, labor & taxes) remain potentially volatile exiting COVID-19 and as long-term regulatory constructs take hold.

Fundamental Analysis of the Underlying Sub-Sectors

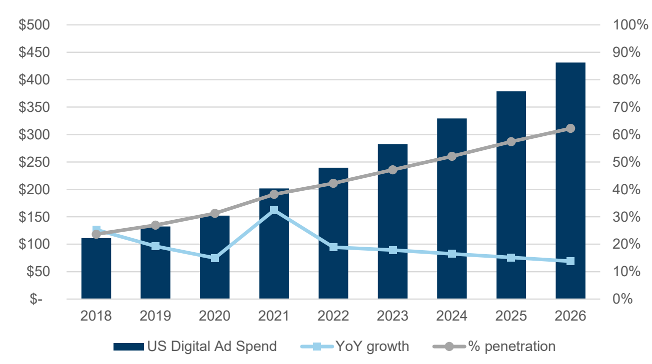
In this initiation, we analyze the growth prospects, margin dynamics and key industry debates across the following sub-sectors – digital advertising, eCommerce, streaming media, online travel, ride sharing/local transportation, food delivery/local commerce & cloud computing. In the below charts, we show where we model the sub-sectors currently sitting in terms of addressable market that defines the end market, the current level of penetration rate and how we see a mix of growth and broader sub-sector competition driving those penetration curves in the coming years.

Exhibit 3: Global (ex-China) Digital Advertising TAM
$bn, '18-'26



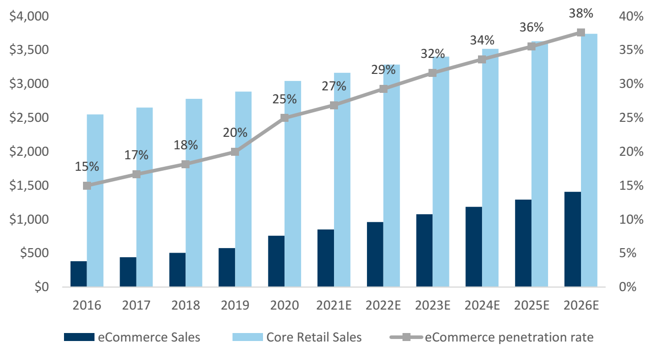
Source: eMarketer, Statista, Goldman Sachs Global Investment Research

Exhibit 4: US Digital Advertising TAM
$bn, '18-'26



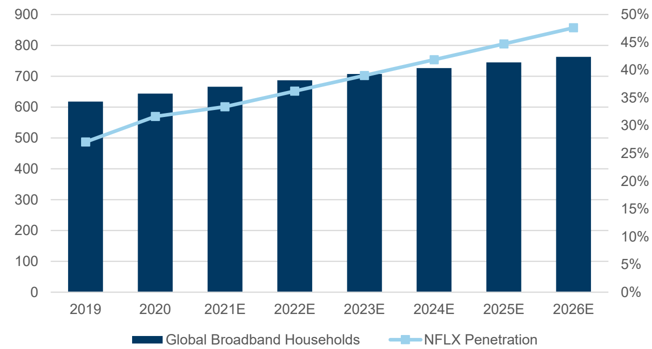
Source: eMarketer, Statista, Goldman Sachs Global Investment Research

Exhibit 5: eCommerce and Core Retail Sales
$bn, '16-'26



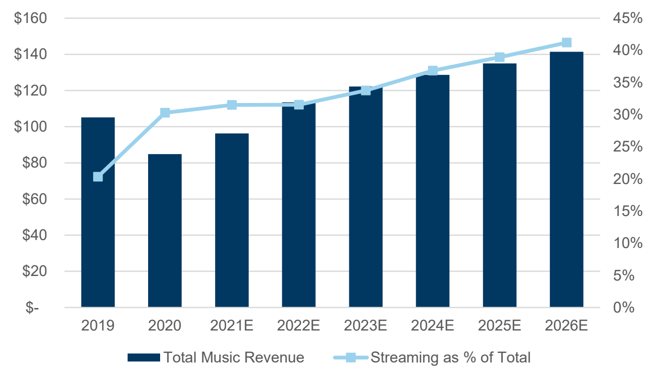
Source: US Census Bureau, Goldman Sachs Global Investment Research

Exhibit 6: Global (ex-China) Streaming Media TAM
mm, '19-'26



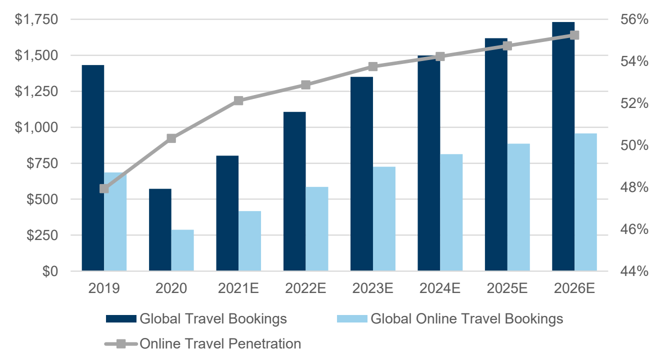
Source: Company data, Goldman Sachs Global Investment Research, Kagan

Exhibit 7: Global Music TAM (ex-Radio)
$bn, '19-'26



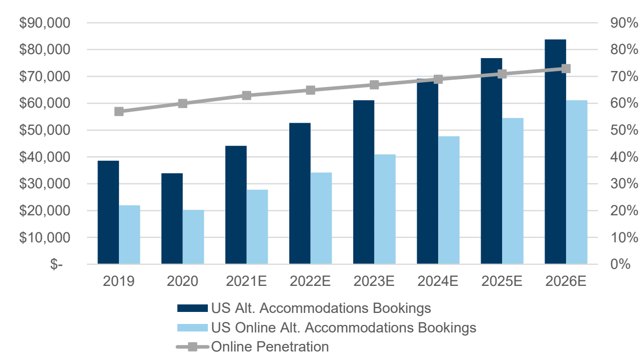
Source: Company data, Goldman Sachs Global Investment Research, IFPI Global Music Report 2021, Music & Copyright, OMDIA, PWC

Exhibit 8: Global Travel TAM (ex-alternative accommodations)
$bn, '19-'26



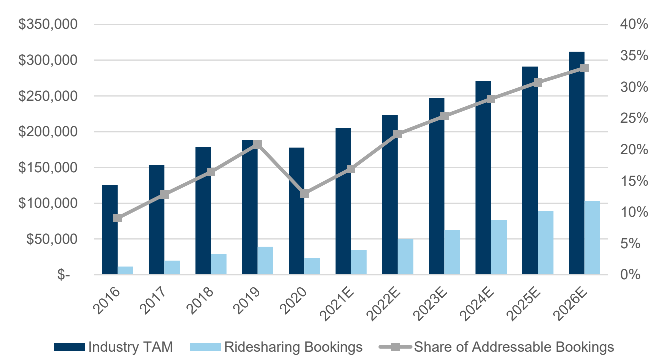
Source: Phocuswright, Goldman Sachs Global Investment Research

Exhibit 9: US Alternative Accommodations TAM
$mm, '19-'26



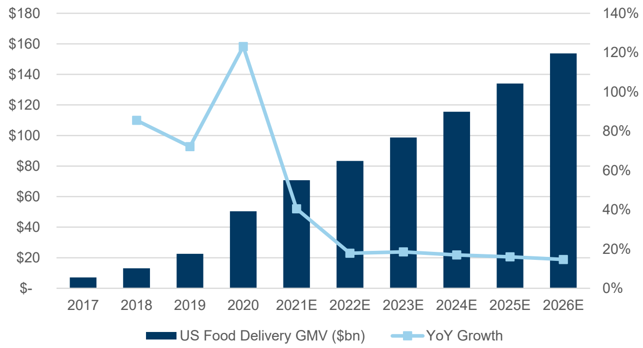
Source: Phocuswright, Goldman Sachs Global Investment Research

Exhibit 10: US & Canada Estimated Rideshare Bookings & TAM
$mm, '16-'26



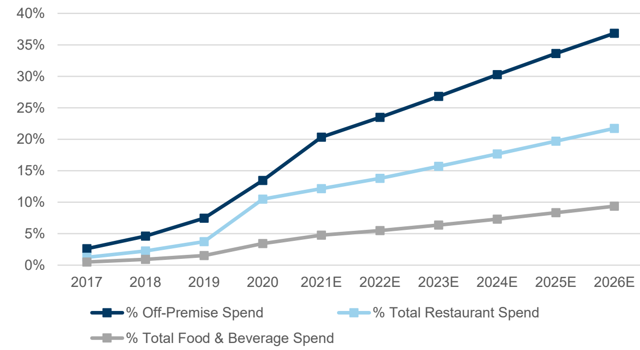
Source: Company data, Federal Reserve Bank of St. Louis, Census Bureau, World Bank, Second Measure, McKinsey, Statistics Canada, Goldman Sachs Global Investment Research

Exhibit 11: US Food Delivery TAM
$bn, '17-'26



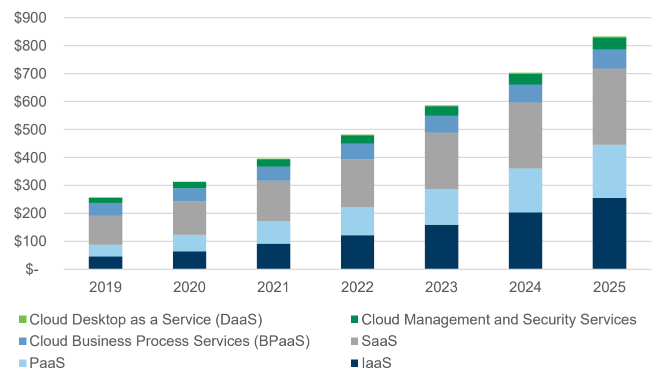
Source: Company data, Euromonitor, Edison Trends, Second Measure, OECD, Goldman Sachs Global Investment Research

Exhibit 12: US Food Delivery TAM Penetration
'17-'26



Source: Company data, Euromonitor, Edison Trends, Second Measure, OECD, Goldman Sachs Global Investment Research

Exhibit 13: Gartner Global Public Cloud TAM
$bn, '19-'25



Source: Gartner

Coverage Universe

Below we outline our ratings, price targets, company thesis, and risk/reward for our coverage universe.

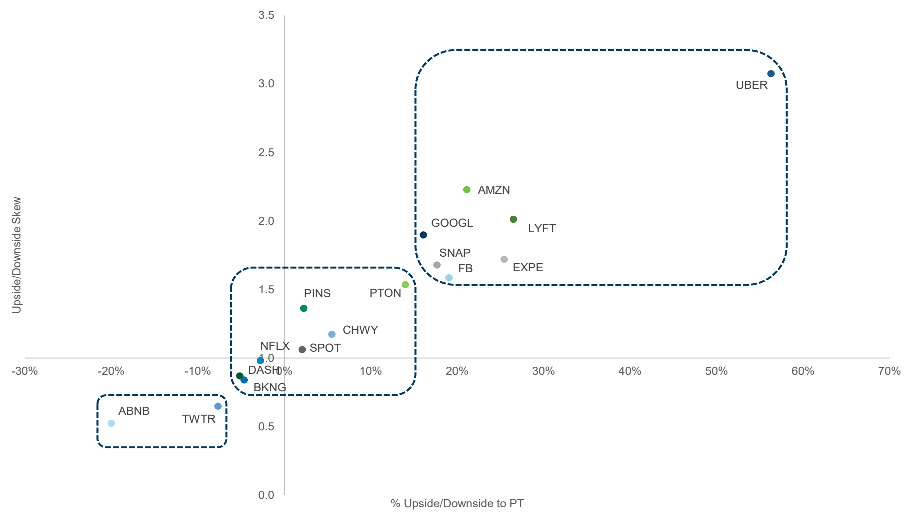
Exhibit 14: US Internet Summary - Ratings, 12-m Price Targets, & Key Thesis

Company	Ticker	Rating	Target Price	Upside Scenario	Downside Scenario	Thesis Summary
Buy Ratings:						
Amazon	AMZN	Buy	$ 4,250	$ 6,450	$ 2,190	We see Amazon as a core long-term holding for Internet investors as the company has exposure to multiple long-term runways (online shopping, cloud computing, digital advertising, streaming media, AI driven computing etc.) that can sustain 15%+ growth while also producing margin expansion in the coming years.
Alphabet	GOOGL	Buy	$ 3,350	$ 4,890	$ 1,830	Alphabet is an industry leader in digital advertising and, despite having compounded revenue growth at a ~20%+ CAGR for over a decade, still has exposure to an array of upside optionality across multiple secular growth tailwinds (media consumption, cloud computing, local commerce, omnichannel, gaming, hardware, AI/ML, etc.).
Facebook	FB	Buy	$ 455	$ 587	$ 253	Facebook is an industry leader in social media and we expect management's focus on investing against long-tailed platform shifts (video, commerce, payments, messaging & AR) to continue to evolve the platform's utility over the medium-to-long-term.
Snap	SNAP	Buy	$ 90	$ 126	$ 47	We see Snap as one of the fastest growing companies in our coverage universe as they capitalize on past investments and a forward mindset on platform/product innovation to capture a mix of user growth and monetization in the coming years.
Uber	UBER	Buy	$ 64	$ 90	$ 25	We see Uber as the next large cap platform ecosystem in our coverage and, while the rate of Mobility recovery and normalization in Delivery will likely dominate short-term debates, we are bullish on the concept of how a collection of products can capture increasing wallet share across multiple end markets with secular growth & rising online penetration rates.
Lyft	LYFT	Buy	$ 64	$ 86	$ 33	We see Lyft as a pure play on the theme of transportation disruption in North America with some upside optionality around the rise of micro mobility and the company's ability to expand its network into last mile eCommerce/logistics.
Expedia	EXPE	Buy	$ 185	$ 255	$ 85	As the leader in North American online travel and #2 player in many markets globally, we believe a mix of stable normalized growth, rising margins (as an output of management's cost efficiency efforts) and the potential for shareholder returns in a normalized travel environment make Expedia a compelling risk/reward from current levels.
Neutral Ratings:						
Booking	BKNG	Neutral	$ 2,230	$ 3,010	$ 1,540	While Booking is a global leader in online travel that stands to benefit from the travel rebound, we see open debates around shape of recovery & key investments management is making (& resulting impact to structural margins) to re-position the company for the long-term ("Connected Trip", growing share in North America, etc.).
DoorDash	DASH	Neutral	$ 187	$ 272	$ 111	We view DoorDash as a category leader in US food delivery (w/ global presence in Canada, Australia & Japan) that is making investments in an array of platform offerings in order to execute against a large & fast growing TAM in local commerce/logistics. That said, our Neutral rating reflects open debates (local commerce competition, tough comps, etc.) & a relatively balanced risk/reward skew at its current level.
Netflix	NFLX	Neutral	$ 590	$ 973	$ 234	While we view Netflix as the long-term industry leader in global streaming media, we see a balanced risk/reward on current shares given outstanding debates both over the short-term (the pace/cadence of subscriber growth post-COVID) and medium/long-term (competitive impacts on subscriber growth, rising content costs, and ability to execute on product innovation).
Peloton	PTON	Neutral	$ 110	$ 159	$ 56	While we view Peloton as the market leader in connected fitness (w/ global presence in US, UK, CAN, Germany, & Australia), we see open debates around the level of normalized growth (after being a clear beneficiary of the stay-at-home dynamic), the size of the addressable market, & RoI on subscriber dynamics in the years ahead.
Pinterest	PINS	Neutral	$ 57	$ 84	$ 35	While we see Pinterest as a unique platform with elements of social media, eCommerce & content creation, we see a balance risk/reward on current shares given outstanding debates both over the short-term (user growth/engagement post-COVID) and medium/longer-term (int'l monetization, platform transformation to capture eCommerce/creator economy oppty, etc.).
Spotify	SPOT	Neutral	$ 260	$ 409	$ 109	We view Spotify as the industry leader in global streaming and is in the process of pivoting its platform (both subscriber and ad-supported) to all forms of audio on a global scale. However, the unit economics of the music product is still predominantly captured by the music industry (not Spotify) and competition remains heightened among global tech platforms.
Chewy	CHWY	Neutral	$ 80	$ 121	$ 38	While we view Chewy as the leader in the pet eCommerce category (w/ emerging businesses in private label & pet health), we see open debates around the potential for a volatile re-opening environment ahead, a well-defined end market dynamic (on our estimates) even when including category and product expansion & high competitive intensity among industry players.
Sell Ratings:						
Airbnb	ABNB	Sell	$ 132	$ 209	$ 81	While we view Airbnb having runway for growth and margin expansion in the coming years, our Sell rating reflects a more negative risk/reward skew when measured against a volatile travel environment, a relatively mature end market (in terms of the broader online travel penetration), what's implied for Airbnb's medium-to-long term growth (& alternative accommodations share of lodging demand) & high levels of competitive intensity.
Twitter	TWTR	Sell	$ 60	$ 89	$ 28	While we view Twitter as a unique media/publishing platform, we see the main open debate for Twitter being whether the company can either: a) morph its core use case to appeal to a wider, more scaled audience base; and/or b) execute against more niche monetization opportunities that align with the platform's current distribution.

Current price as of 9/7/2021 close

Source: Company data, Goldman Sachs Global Investment Research, FactSet

Exhibit 15: Risk/Reward Matrix



Source: FactSet, Goldman Sachs Global Investment Research

Valuation Framework

Our valuation framework for US Internet companies utilizes a two-pronged approach with equally weighted methodologies: 1) a multiple to growth approach on a medium term estimate (two year forward); & 2) a discounted analysis on a longer term (five year) estimate of profitability. Our price target is the base case scenario of this valuation approach applied to our published estimates.

For growth companies (~20%+ revenue growth in the forward 2-3 years) that two pronged approach involves: 1) either an enterprise value (EV) to revenue or gross profit (depending on our determination of the reflective topline economic driver of the business) with a multiple reflective of the growth in that metric (based on the '21-'23 CAGR) and utilizing a ratio range of 0.05x to 0.32x (the historical range of the entire US internet sector over the past ~20 years) & 2) applying an EV to EBITDA multiple to growth on a 5 year out EBITDA (including the impact of stock based compensation) discounted back 3 years to align with our 2 year forward approach on revenue/gross profit. These two valuation approaches are each weighted 50% in our analysis.

For more mature companies (~20% or lower growth in the forward 2-3 years) that two-pronged approach involves: 1) an EV to EBITDA (adjusted for stock based comp) with a multiple reflective of the growth in that metric (based on the '21-'23 CAGR) and utilizing a ratio range of 0.1x to 0.3x (the historical range of the entire internet sector over the past ~20 years); & 2) an EV to FCF multiple to growth on 5 year out FCF (including the impact of stock based compensation) discounted back 3 years to align with our 2 year forward approach on EBITDA. These two valuation approaches are each weighted 50% in our analysis.

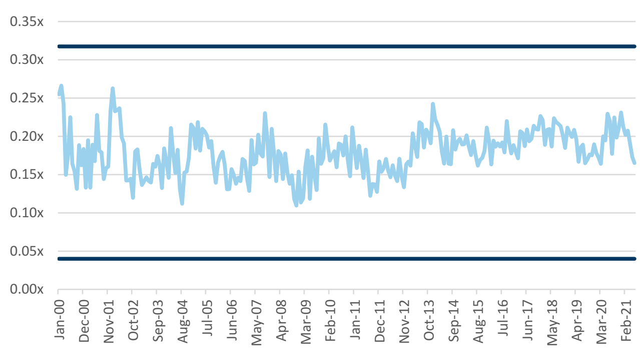
Below we include multiple-to-growth ratios for Sales, Gross Profit (GAAP), EBITDA (GAAP), and FCF over the past 10-20 years for the entire internet sector.

- Average EV/Sales-to-Growth ratio of ~0.18x (within +/-1 standard deviation range of

~0.04-0.32x)

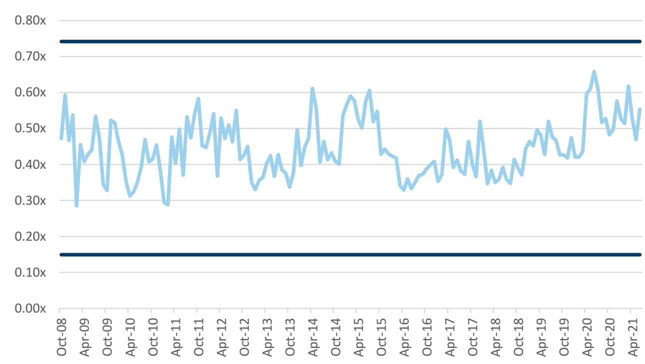
- Average EV/Gross Profit-to-Growth ratio of ~0.45x (within +/-1 standard deviation range of ~0.15-0.74x)
- Average EV/EBITDA-to-Growth ratio of ~0.81x (within +/-1 standard deviation range of ~0.55-1.07x)
- Average EV/FCF-to-Growth ratio of ~1.39x (within +/-1 standard deviation range of ~0.80-1.98x)

Exhibit 16: EV/Sales-to-Growth - Historical Trading Range
2000-2021



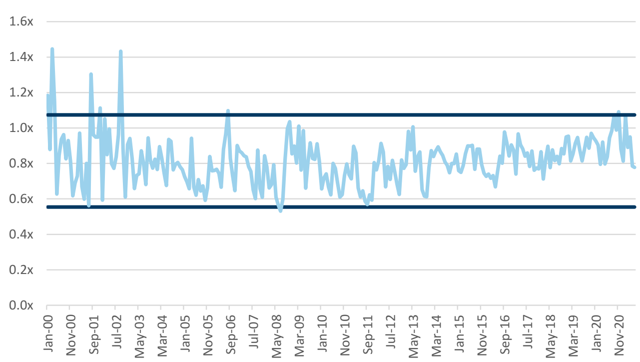
Source: FactSet, Company data, Goldman Sachs Global Investment Research

Exhibit 17: EV/Gross Profit-to-Growth Historical Trading Range
2008-2021



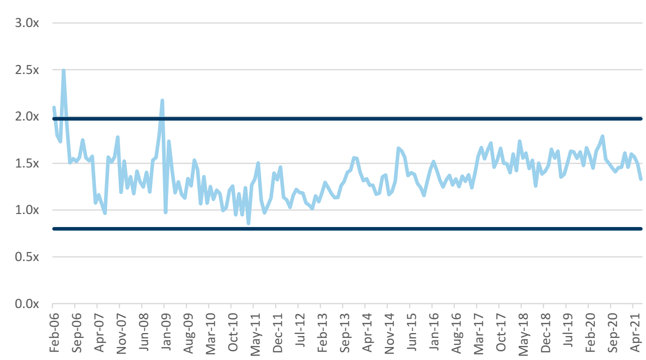
Source: FactSet, Company data, Goldman Sachs Global Investment Research

Exhibit 18: EV/EBITDA-To-Growth Historical Trading Range
2000-2021



Source: FactSet, Company data, Goldman Sachs Global Investment Research

Exhibit 19: EV/FCF-To-Growth
2006-2021

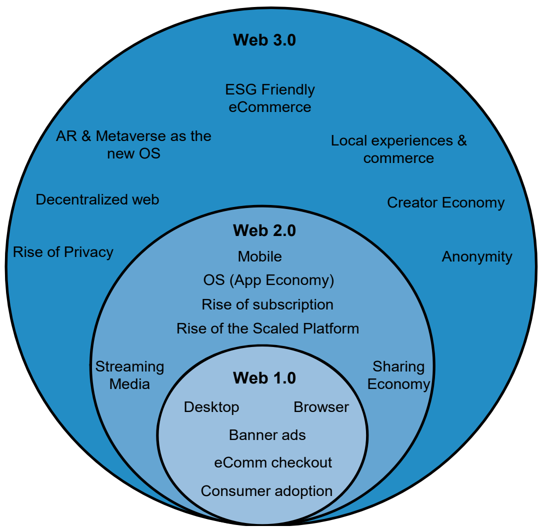


Source: FactSet, Company data, Goldman Sachs Global Investment Research

Risk Factors

In terms of risk factors for the sector, we expect rising regulatory scrutiny to persist in the coming years. As discussed in our Industry Regulation section below, we believe current outstanding regulatory matters (and potential future matters of similar nature) will most likely manifest as potential headwinds to either operating results and/or valuation multiples. That being said, we believe investors have largely priced in these potential operating headwinds (given our view that full-scale business model changes are unlikely) based on significant multiple compression seen over the past five years (see Industry Regulation section for more detail). The biggest risk to the sector, in our view, is Web 2.0 (i.e. the shift from desktop computing to a more scaled mobile platform approach) maturing and/or being disintermediated faster than we currently anticipate driven by disruption from smaller, more verticalized competitors focused on initially smaller market opportunities (especially as post-COVID-19 shifts in consumer behavior persist). We will continue to monitor trends around personalized video publishing, media consumption patterns, the creator economy, hyper-local commerce, niche or industry vertical eCommerce marketplaces, the rise of the Metaverse & augmented reality for signs of disruption to the existing scaled platform players.

Exhibit 20: Evolution of Decentralized Web



Source: Goldman Sachs Global Investment Research

GS Framework for Internet Investing

Based on our historical perspective and fundamental analysis of the sector, we introduce the Goldman Sachs Internet Investing Framework. The Framework is a mixture of quantitative and qualitative measures that are meant to frame a company's prospects for growth, economic returns, capital allocation, potential headwinds and current stock market sentiment/positioning. In the report, we analyze the prospects of a number of the identifiable sub-sectors under coverage in terms of key debates measured against the Framework. In addition, we apply the Framework on an idiosyncratic basis to each company that we are launching coverage on today.

Our ten factors in the Framework are rooted around a few key themes important to Internet investing - a) growth (addressable market, penetration curve, revenue growth); b) focus on market share dynamics of both online/offline competitors; c) unit economics and a long-term margin profile at maturity; d) a mgmt focus on allocating opex/capex to growth opportunity; & e) market dynamic (in the form of estimates, sentiment, stock performance).

Exhibit 21: GS Ten Factor Investment Framework for US Internet

GS Ten Factor Investment Framework for US Internet

Factor	Description
Growth & Market Share	
1) Total Addressable Market (TAM) & Revenue Growth	• Industry or sub-sector total addressable market opportunity as end demand market moves online • Level of revenue growth relative to industry peers and global GDP
2) Market Share Dynamics	• Gaining/Losing Market Share Within Its Core Business • Company's take rate / revenue economics • Overall competitive intensity
Unit Economics & Margins	
3) Unit Economics & Margins	• Gross & operating profit margins relative to industry or sub-sector • Cadence to margin forecasting as an indicator of business moat • Pricing Power
Optionality & Capital Returns	
4) Optionality & Innovation	• Exposure to any upside optionality that could open up new product or business segments • Hiring & Investing Trends As Indicative of Intensity
5) Capital Deployment & RoI	• Generation of FCF & Return on Invested Capital Forecasting • Actions to unlock equity value from current levels • Capital Returns
Outside Factors	
6) Regulation	• Exposure to global regulatory attention/scrutiny • How factored into current forward multiples is such exposure?
7) ESG	• Corporate governance & voting structure • Broader company impacts to environmental and social factors
Estimates & Market Dynamics	
8) Stock Trading Dynamics	• Current risk/reward based on earnings estimates, investor sentiment and/or technical analysis
9) GS Estimates vs. Street	• Potential for upside/downside surprise of operating results vs. consensus estimates • Potential for earnings revision cycle & resulting impact on stock performance
10) Current Valuation vs. Historical Trends	• Current valuation compared to both company's & industry comp group's historical trends • Potential for mean reversion/convergence of multiples to industry averages or expectations for premium/discount to persist

Source: Goldman Sachs Global Investment Research

The key to Internet investing is to a) identify where a company is in its lifecycle (growth, "GARP" or "growth at a reasonable price" or Value/Turnaround); b) to determine whether fundamental analysis can bear out a disconnect in how a company is being categorized by the market - typically that disconnect can provide investors with opportunities to capture compelling risk/rewards (both positive and negative) as market disconnects concerning key company debates are proven/disproven by fundamental operating performance; & c) framing current trading dynamics/sentiment against the array of (a) and (b).

Exhibit 22: Three Types of Internet Stocks

Growth	• 20%+ revenue growth • High level of investments to scale • <10% penetration of end-market opportunity; market share of 35%+ • Valuation matters less to investors • Incremental revenue / gross profit growth is invested back into the business • Little-to-no focus on current period margin optimization
GARP (Growth at a Reasonable Price)	• Teens to 20% revenue growth • Increased investor focus on "what are you investing for" • Long-term margin structure begins to come into focus and plays a more important role in the multiple paid by investors • Capital allocation (over multiple timeframes) becomes another critical investor factor • Quality of the sustained growth → relative market share & potential for any disruption become key
"Value"/ Turnaround	• Growth <10% • Mature (peak) type margin structure • New investments by mgmt. to re-stimulate growth or pivot the business • Valuation matters (& typically such a stock looks cheap) BUT that is almost never the driver of stock performance in Internet • Potential for growth + capital needed vs. market positioning dynamics + capital allocated to shareholders = real stock price drivers

Source: Goldman Sachs Global Investment Research

The most compelling positive risk/reward has always presented itself when "growth" is being treated like "GARP" by the market and an investor can invest alongside a quality long term compounding opportunity that is currently shadowed by short/medium term debates. We see a number of those debates currently on such topics as: post-pandemic normalized growth, investment vs competitive dynamics, uncertainty on innovation investments within large platforms & potential regulatory headwinds.

The least compelling risk/reward in the sector has typically manifested in a few forms - a "value" turnaround situation, the market incorrectly extrapolating (especially in valuation) long-term growth from current period dynamics & a company's market share or business model that caps long term margin structure. The "value" situation typically looks cheap but long time followers of the sector can remember that Internet turnarounds are few in terms of success. The latter two examples are typically a market disconnect between pricing/valuation and medium/long term modeling that can hold up for longer than many investors' time horizons.

Each of the sub-sectors that we cover are at different points of offline to online end market penetration, level of sustained revenue growth in the coming years, margin dynamics (maturity vs investment opportunities) & exposure to potential headwinds (regulation, competition, etc). We explore all of those sub-sector dynamics in the sections below.

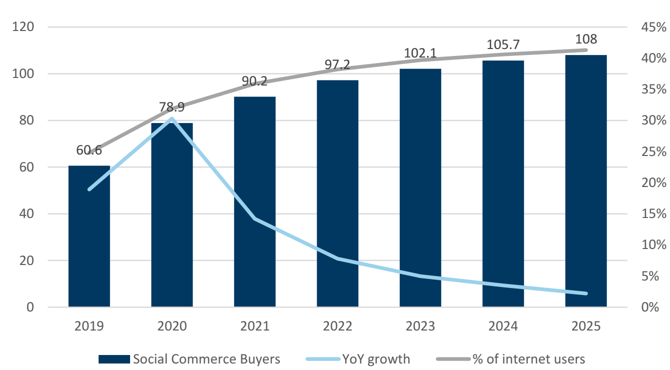
10 Themes For US Internet

In addition to our broader Industry analysis and the GS Internet Investing Framework, we also frame our Top 10 Investor Debates/Themes for the sector over the next 12-24 months (Exhibit 2). The themes cut across companies and sub-sectors to highlight areas relating to industry growth drivers, future margin potential (reflected in scale benefits & competitive intensity) and potential risk factors that might act as headwinds. We will look to revisit many of these themes in more depth as we see them as critical to understand the industry shifts ahead.

Theme #1: Line Between Commerce & Advertising Is Blurring (Most Exposed: AMZN, FB, GOOGL, PINS, SNAP)

Across the sector, we've witnessed a blurring of the lines between traditional digital advertising & eCommerce business models over the last 2 years - Amazon's demand generation & video advertising strategies, the rise of social shopping (Facebook, Instagram, Pinterest), marketplace models supplementing core revenue with ad revenue & the rise of seller marketplace models (Facebook Marketplace, Google Shopping and Shopify). We see scale as a key determinant of success as these lines blur and create a flywheel based on the depth of consumer demand that can be fulfilled with product category availability (driving brand/seller volume based success). We see Amazon as well positioned to capitalize on this theme globally and will be watching a mix of product innovation and execution by the digital ad companies as they try to capitalize on morphing consumer media consumption and intent expressions into purchase activity at the bottom of the consumer funnel.

Exhibit 23: US Social Commerce Buyers (m)

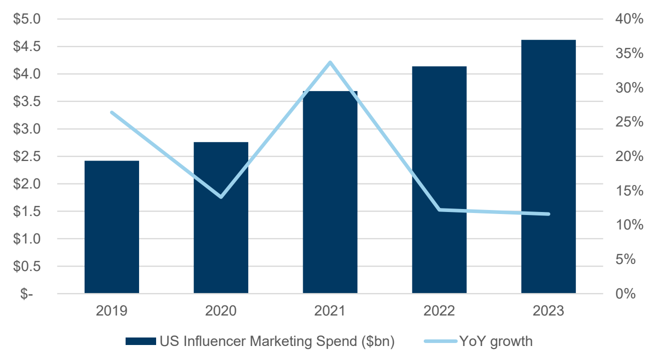


Source: eMarketer

Theme #2: The Rise of the Creator Economy (Most Exposed: FB, GOOGL, PINS, SNAP)

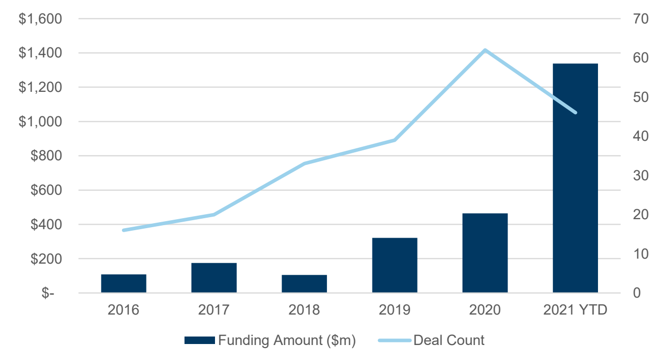
With the rise of new (creator focused) social media networks and demonstrable shifts in consumer time spent during the COVID pandemic, we have seen a noticeable shift as the creator economy has risen. Unlike the rise of the social media news feed (where consumers chose to post their content to enjoy the network effect of friends/family), the rise of creator tools, monetization aspects and the role of the "influencer" has seen that shift met with a new industry dynamic. Platforms embracing this shift are gaining time spent but increasingly need to share/split the unit economics of that traffic monetization with the content creator. We see YouTube maintaining its relevance due to its global scale and monetization splits but will watch how more traditional social media companies embrace the necessary content costs needed to garner creator talent to their platforms. We also see the rise of newer platforms (TikTok and Cameo) as disrupting some of the time spent media paradigm.

Exhibit 24: US Influencer Marketing Spend ($bn)



Source: eMarketer

Exhibit 25: Funding and deals to creator-focused companies
Disclosed deals & equity funding ($m), 2016-2021 YTD (6/4/21)

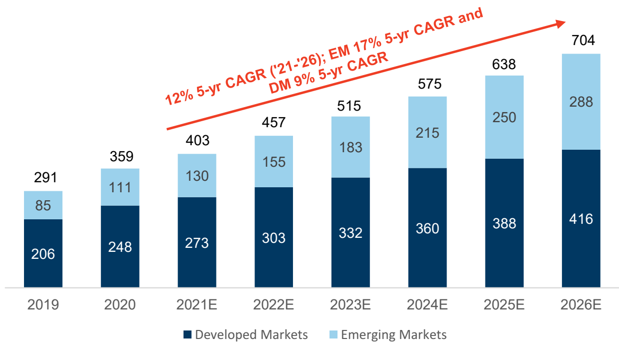


Source: CB Insights

Theme #3: Streaming Media Platforms Reach Global Scale But Content Cost Questions Remain (Most Exposed: AMZN, NFLX, SPOT)

As we lap the media consumption habit changes due to COVID, we see the streaming media (video/audio) landscape holding much of its pronounced subscriber growth gains. We still see a nearly doubling of subscriber count in our Netflix and Spotify models in the next 5 years but also see much of the subscriber growth coming from lower priced tiers in emerging economies (offset by positive pricing power dynamics in mature countries). With subscriber growth less of a driver of economic returns, we see a shifting investor debate to when the industry reaches "peak content spend". We are bullish on Netflix's ability to slow the second derivative of content spend growth in the coming years and produce outsized margin returns. It remains an open question whether Spotify can move beyond its music licensing model and produce upside to long term margin commentary as its "audio platform" (as opposed to music) strategy takes hold.

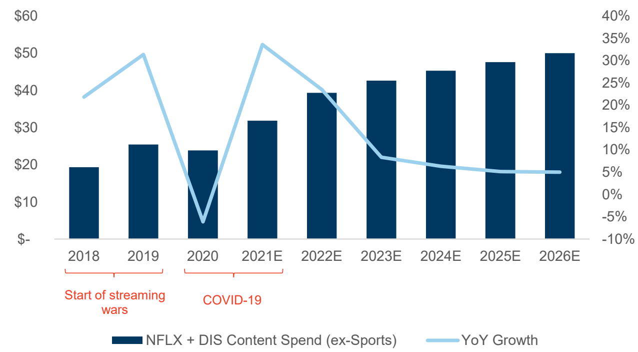
Exhibit 26: Netflix & Spotify Subscribers by Market
mm, '19-'26



Developed markets: Netflix UCAN & EMEA subs and Spotify NA & Europe subs. Emerging markets: Netflix LatAm & APAC subs and Spotify LatAm & RoW subs.

Source: Company data, Goldman Sachs Global Investment Research

Exhibit 27: Netflix & Disney Content Spend Combined
$bn, '18-'26



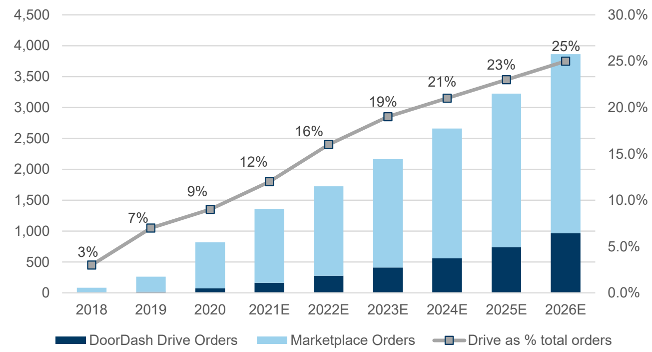
Disney contend spend excludes sports

Source: Company data, Goldman Sachs Global Investment Research

Theme #4: The Shift of Local Commerce Activity Online (Via Mobile) Drives Growth & Investment Across Verticals (Most Exposed: AMZN, UBER, DASH, LYFT)

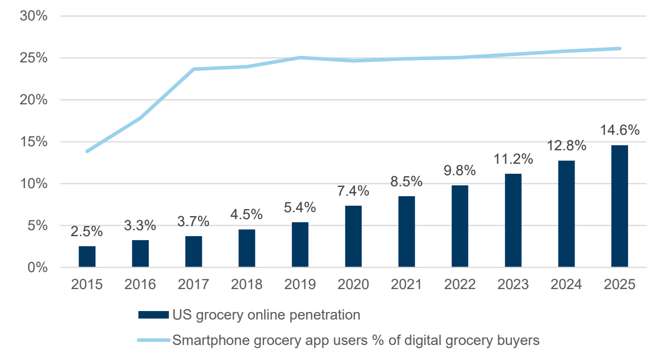
One of the behavioral changes of the past 18 months was a noticeable uptick in local eCommerce activity as food delivery, ship from store, and buy online and pickup in store all became more normative consumer behaviors. In addition, the rise of the last mile logistics platforms (Uber, Lyft, DoorDash, etc.) have invested (and continue to do so) toward the opportunity of such local order/delivery dynamics remaining permanent (& possibly expanding) in the post-COVID world. What began as Amazon's industry altering shift to Prime 2-day shipping is quickly morphing into an industry battle for both consumers and merchants around same day and increasingly "next few hours" delivery. We expect these efforts could take shape around a few key verticals (food delivery, convenience, and grocery) with potential to extend into other household errands, personal services & shifts in big box retailing. Given local commerce is still under-penetrated relative to other offline to online shifts, this theme could be a contributor to incremental growth not already in financial projections but is also likely to come with high competitive intensity and high levels of investment in the name of supply/demand.

Exhibit 28: GSe DoorDash Order Mix (Marketplace vs. Drive)
mm, '18-'26



Source: Company reports, Goldman Sachs Global Investment Research

Exhibit 29: US Grocery Online Penetration & Smartphone Usage
'15-'25



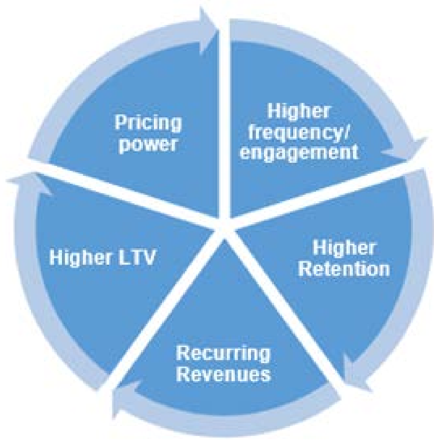
Includes products or services ordered using the internet, regardless of the method of payment or fulfillment; grocery products include food and beverage (both perishable and non-perishable items) and household consumables such as cleaning, personal care and pet products that you would typically find at a grocery store; excludes food services and drinking place sales; 18+ adults; smartphone users who use at least one grocery app on their smartphone at least once per month

Source: eMarketer

Theme #5: Subscriptions Becoming the Hallmark of Consumer & Platform Utility But Consumer Fatigue Remains Open-Ended (Most Exposed: AMZN, NFLX, SPOT)

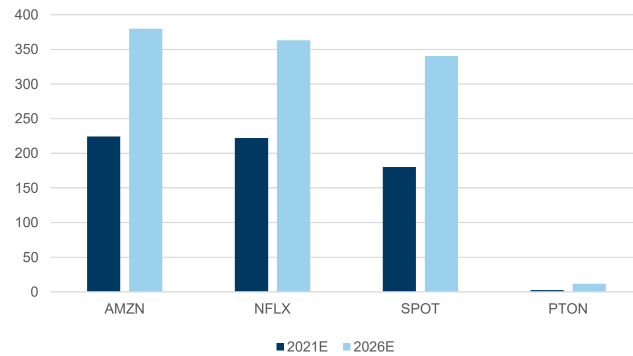
While the idea of subscription-based models has been around for quite some time (e.g., Netflix in 2007 and Amazon in 2005), we have observed an increasing number of companies adding subscriptions as part of their overall consumer offering. Despite lower per order economics tied to subscriptions, most companies have recently adopted this strategy as a means to drive higher retention, higher engagement/frequency of use, and greater LTVs with the potential to raise prices as they deliver more value to the consumer. However, with an abundance of subscriptions in the marketplace, a key concern is around the concept of subscription fatigue among consumers. We expect the scaled players (AMZN, NFLX, SPOT) will be best positioned given they already have a large loyal customer base in addition to a number of value-added features on the platforms. Regarding more recent subscription offerings (e.g., DASH, LYFT, UBER, PTON, CHWY etc.), we believe companies will need to execute on delivering a compelling subscription offering in order to gain wider adoption.

Exhibit 30: Despite lower per unit economics, subscriptions offer…



Source: Goldman Sachs Global Investment Research

Exhibit 31: Number of Subscription Plans by Platform
mm, '21 & '26

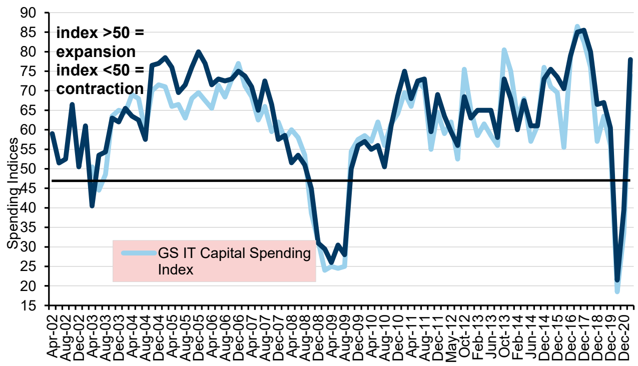


Source: Company data, Goldman Sachs Global Investment Research

Theme #6: The Growth & Competitive Landscape for Cloud Computing (Most Exposed: AMZN, GOOGL)

We see the broader adoption of cloud computing services by enterprise customers as having reached a tipping point due to broad based increases of digital spending and shifts in IT budgets toward cloud adoption. We see revenue growth for the sector set to maintain healthy levels in the coming quarters as revenue backlog growth for public cloud providers has surprised to the upside over the past 12 months. In addition, the overall pricing dynamic (across IaaS/PaaS offerings) remains relatively stable (despite industry conversations pointing to GOOGL utilizing pricing the most aggressively given their challenger status amongst the "Big 3" cloud providers). Given the healthy operating margins reported by AMZN's AWS segment (mid-20%s to 30% EBIT margins) at their scale of ~$59bn run-rate revenue, we remain optimistic about the operating profit potential for scaled players as the industry matures over the next 3-5 years.

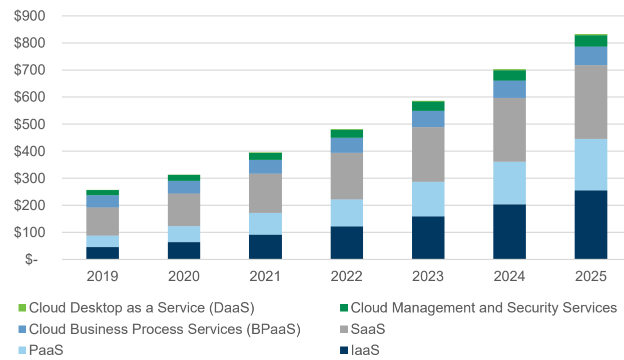
Exhibit 32: Overall IT Spending and Capital Spending Indices have both rebounded strongly



Index based on the following question: Based on your current thinking, how do you expect your overall 2021 IT spending growth to be relative to 2020? What do you expect your IT capital spending growth (spending on new equipment and software only; not including staffing, services, depreciation, occupancy, or other) to be in 2021?

Source: Goldman Sachs Global Investment Research

Exhibit 33: Gartner Global Public Cloud Size
$bn, '19-'25

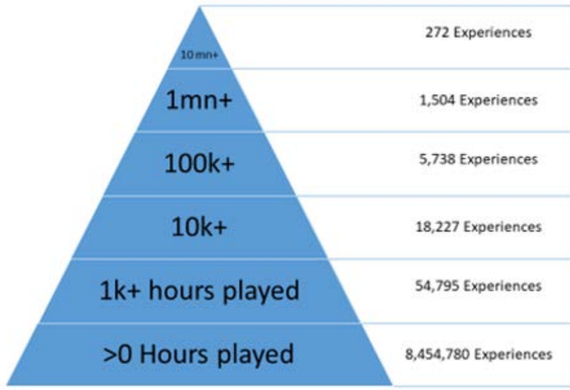


Source: Gartner

Theme #7: The Next Computing Wave Is Likely Augmented Reality – Here Comes the Metaverse (Most Exposed: FB, SNAP)

In the early '90s, Neal Stephenson first coined the phrase "metaverse" in his science fiction novel, Snow Crash. Decades later, industry investor/analyst Matthew Ball raised awareness around the phrase "metaverse" in a series of essays. We think the broad concepts Mr. Ball wrote about lay the framework for how investors should envision key elements of the industry shifting from Web 2.0 to Web 3.0. Large tech platforms (which benefited from the rise of mobile computing apps) now look toward augmented reality as the next computing platform shift. Along those lines, repositioning key consumer/enterprise offerings to evolving media consumption applications (gaming, avatars, attending sports/concerts, exercise) seems like the next logical shift in consumption patterns that will likely drive platform unit economic shifts and create new winner/loser status among industry players. One interesting aspect of this evolution is the inter-connectivity of such a computing landscape and the possible erosion of the walled garden elements of the mobile computing wave. While there remain key friction points to solve such as hardware form factor, broadband connectivity and mass appeal use cases, most investors and tech operators (probably most notable is Mark Zuckerberg's focus at Facebook and the broader gaming industry) are planning and investing toward platform evolution in this direction.

Exhibit 34: Roblox 2020 Experiences & Hours of Consumption
Roblox experiences by number of hours played in the TTM



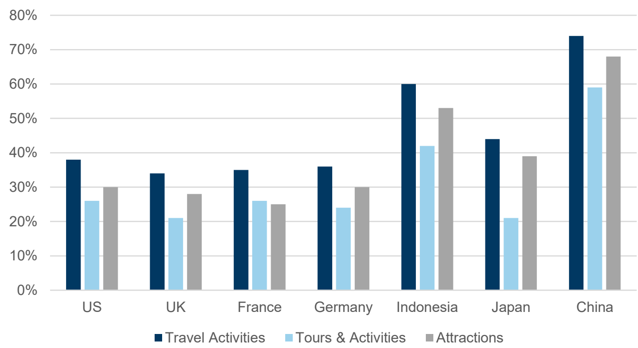
As of December 31, 2020

Source: Company data, Goldman Sachs Global Investment Research

Theme #8: Online Travel Becomes More Personalized With Scaled Local Offerings Post-Pandemic (Most Exposed: BKNG, EXPE, ABNB)

No sector was more impacted by the events of the last 18 months than online travel. Prior to the pandemic, the industry was facing slower growth, continued high levels of competition & debates around marketing leverage. While the short/medium term is going to face a series of easier comps to grow against, many of those same issues remain for the sector as it returns to pre-pandemic volume levels (our estimate is mid-'22). Relative exposure to the fastest growing areas of the industry (shared/alternative accommodations & under-penetrated geographies/sub-segments of travel) will allow some players to outgrow their peers. In addition, two key elements of how travel evolves – owning more of the consumer wallet per trip via local/experiences & marketing leverage (deeper customer relationships and in-app purchasing) are likely going to be the biggest driver of increased market share, faster growth and operating margin leverage. As the Internet economy also becomes more personalized & consumers having incrementally more flexible working environments, we see some aspects of the online travel experience garnering more attention and wallet share from global consumers.

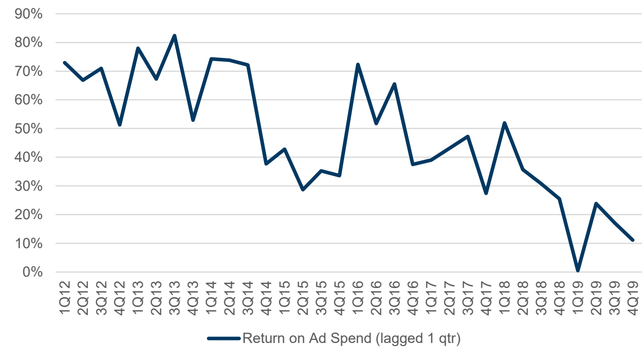
Exhibit 35: Purchased Travel Activities in Last 12 Months, by Activity Type



Question: Which of the following travel components have you booked for your leisure trips taken in the past year? Select all that apply; Based on findings from online consumer survey July 22-31, 2019; 5,782 qualified responses (U.S. = 826; France = 856; Germany = 863; U.K. = 820; Japan = 804; Indonesia = 730; China = 883)

Source: Phocuswright

Exhibit 36: Online Travel Return on Ad Spend
'12-'19



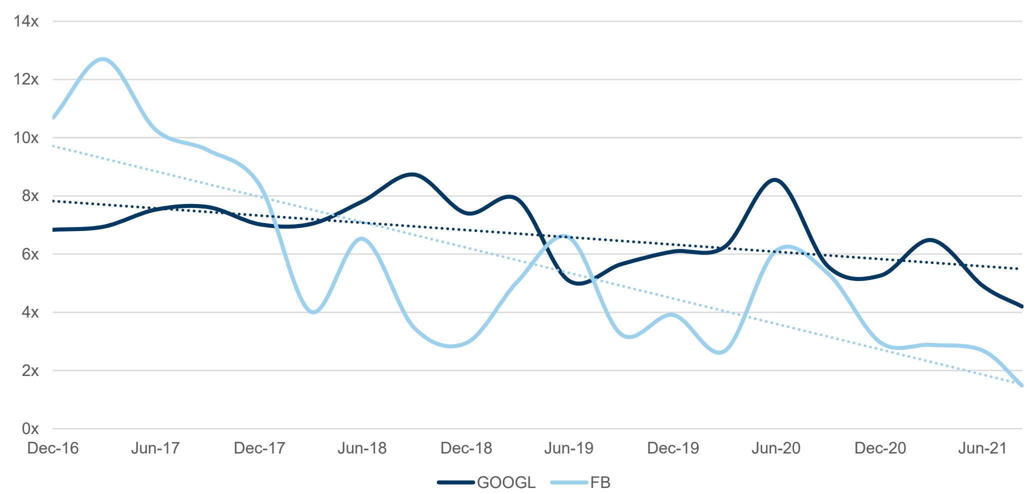
Reflects incremental revenue divided by advertising spend (lagged one quarter) for BKNG & EXPE

Source: Company data, Goldman Sachs Global Investment Research

Theme #9: Regulation Could Impact Costs In Coming Years; Scaled Players Can Absorb Impact (Most Exposed: FB, GOOGL, AMZN)

One of the persistent themes of the past few years has been the rise of government focus on the business practices of the industry's scaled players. In particular, we see three potential dynamics: 1) "headline noise" if investigations, fines and new rules proliferate, 2) rising costs to comply with an array of global initiatives (particularly in the area of data collection and consumer privacy) and 3) headwinds to any in-market consolidation or strategic M&A by large players (causing the industry to lean back on internal product R&D). Over the short/medium term, the regulatory focus on anti-trust issues continues to be the biggest wild card (both in sentiment and possible industry construct) as a paradigm shift could take hold on market share definitions, industry practices, cost inputs, data collection and corporate tax rates. Such scrutiny of the largest companies under our coverage is likely to persist over the medium term. Investors are likely to remain acutely focused on "headline risk" and watch for new developments. We believe investors have largely priced in these potential operating headwinds - to illustrate, Exhibit 111 shows that the average P/E multiple spread between Alphabet/Facebook and the S&P 500 has seen significant compression over the past 5 years (despite these companies having produced above market-average earnings growth). While the long-term impact of potential regulation remains unknown, history of technology investing would inform that regulation is a lagging indicator. Disruption usually presents itself from companies that are at the forefront of the next wave of computing – hence, our next theme is the rise of Web 3.0.

Exhibit 37: Average Historical 12-Mo Fwd. P/E Spread (vs. S&P 500)



Shows the spread between GOOGL & FB's historical P/E (based on consensus forward 12-month EPS ests) and S&P 500

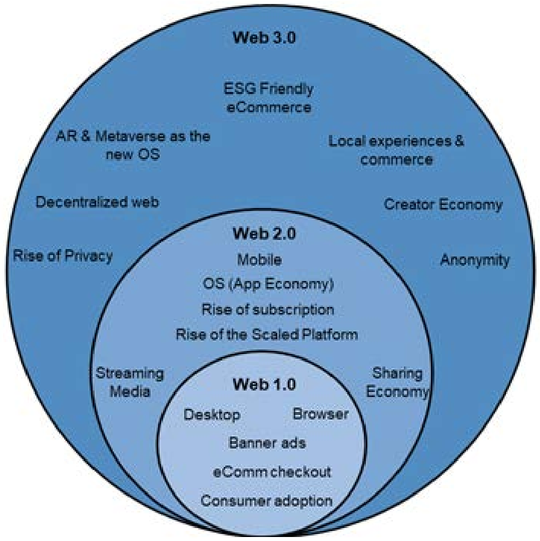
Source: Goldman Sachs Global Investment Research, FactSet

Theme #10: Watch for The Rise of the Decentralized Web (Most Exposed: Large Established Players)

In our view, the global Internet is in the later innings of the innovation curve of Web 2.0 (the shift from desktop to mobile computing & from local to cloud storage) and the "winners" of this wave of the Internet are now firmly established. The defining characteristics of a Web 2.0 "winner" are scale of users, utility like nature to mobile/desktop applications/services (if not a family or ecosystem of apps) & low to no distribution costs (companies have gained broad based familiarity). As seen in the figure below, we see dramatic shifts in the industry trends in Web 3.0 (decentralized, less global scaled platform, more local/niche, etc) that could impact current investor perceptions of platform moat/strength, industry input costs, possible headwinds to monetization driven by personalization and potential for shifting media and commerce trends as we transition to Web 3.0.

So what form might "Web 3.0" take – we lay out a few key principles: a) likely more control by the user of their data; b) likely a more micro focus - a mean reversion on scale (either in end market being tackled or in relationship between the platform and the user); c) the rise of individual as creator and creator looking to monetize their content more directly with "fans"; d) increasingly decentralized (the eventual breakdown of the mobile operating system app store distribution model seems like a 5-10 year development worth monitoring); & e) flexibility (if not innovation) on payment mechanisms aimed at a mix of themes (decentralized privacy and anti-establishment). As with any new wave of computing, the disruption that it causes is likely to be more impactful on current industry dynamics than outside forces (like potential regulation).

Exhibit 38: Evolution of Decentralized Web



Source: Goldman Sachs Global Investment Research

Digital Advertising

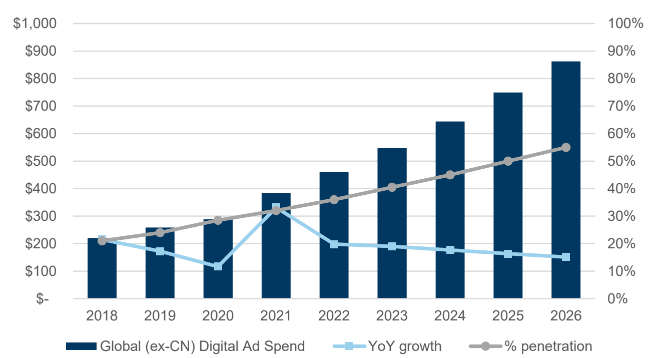
TAM & Market Sizing

We estimate total global (ex-China) digital advertising spend will grow at an ~18% '21-'26 CAGR to reach ~$862bn by 2026, including US digital advertising spend of ~$431bn (~16% '21-'26 CAGR). Our estimates imply global (ex-China) digital penetration of total spend (including advertising & marketing services) will increase from ~29% in 2020 to ~41% in 2023 and ~55% in 2026 (for US: ~31% in 2020 / ~47% in 2023 / ~62% in 2026).

While most industry sources have historically used only traditional media spend (TV/linear, digital, OOH, print, radio, etc.) when calculating a total addressable market & digital penetration, we utilize a more expansive definition for our total addressable market inclusive of both traditional media and broader marketing services (trade promotion, telemarketing, sponsorship, etc.) - we believe this is a more accurate representation of the total addressable budget that digital platforms have exposure to as spend increasingly shifts online. By these estimates, digital still represents only ~29% of total global spend, highlighting a long runway for future secular growth.

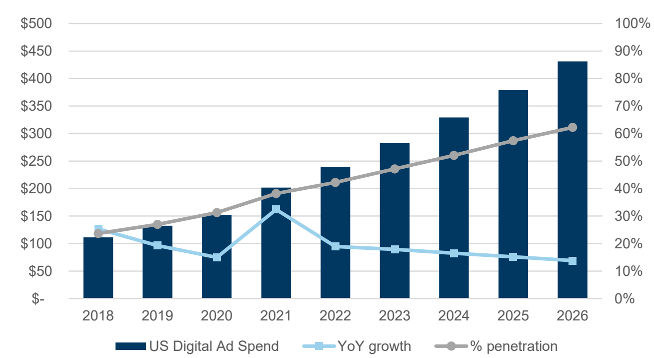
The key drivers of this industry growth, in our view, will come from a combination of organic growth in existing digital advertising budgets as well as a steady shift of offline/traditional budgets into digital channels, especially as an increasing portion of new/DTC companies are structured as "digitally-native" businesses (as defined by their operational, marketing & go-to-market strategies). We outline the key industry themes/growth drivers in more detail below.

Exhibit 39: Global (ex-China) Digital Advertising TAM
$bn, '18-'26



Source: eMarketer, Statista, Goldman Sachs Global Investment Research

Exhibit 40: US Digital Advertising TAM
$bn, '18-'26



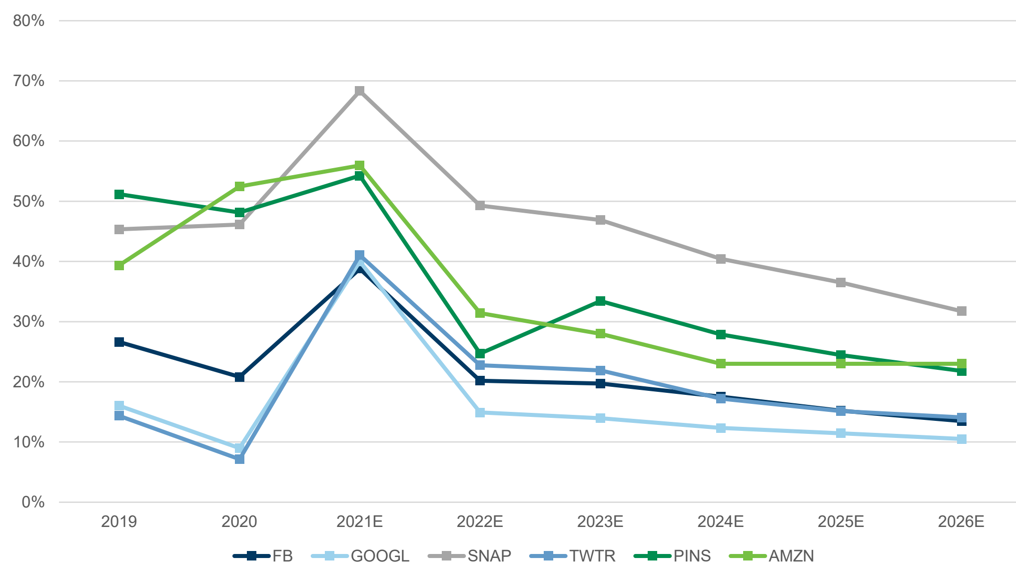
Source: eMarketer, Statista, Goldman Sachs Global Investment Research

Revenue Growth

In our view, the scaled, mega-cap platforms (Alphabet, Facebook & Amazon) will continue to capture the vast majority of absolute advertising budget shifting online for a number of reasons, including: a) they con't to lead innovation within new channels/verticals (shopping/social commerce, streaming media & video, connected TV, creator/influencer marketing, etc.); & b) the value of scaled, first-party data, audience targeting capabilities & measurement/attribution con't to increase in a privacy-focused ecosystem. For the incumbent mega-caps, while GOOGL & FB are likely to see some natural deceleration/ceding of market share on a relative basis (given their current scale), we still see them as well-positioned to maintain their market-leading position within key digital ad channels and expect them to maintain solid revenue growth rates over the next several years.

That being said, we believe the smaller platforms (TWTR, SNAP & PINS) still have a solid runway to capture modest share gains and con't to see above-industry avg growth over the next several years driven by a mix of: a) overall industry tailwinds (as outlined below); & b) idiosyncratic monetization opptys & investments being made by each platform to improve overall user & ad product offerings.

Exhibit 41: Advertising Revenue Growth
% YoY, '19-'26



"GOOGL" includes Google Gross Advertising revenues; "AMZN" includes Amazon Other revenues; all others include ad revenues only

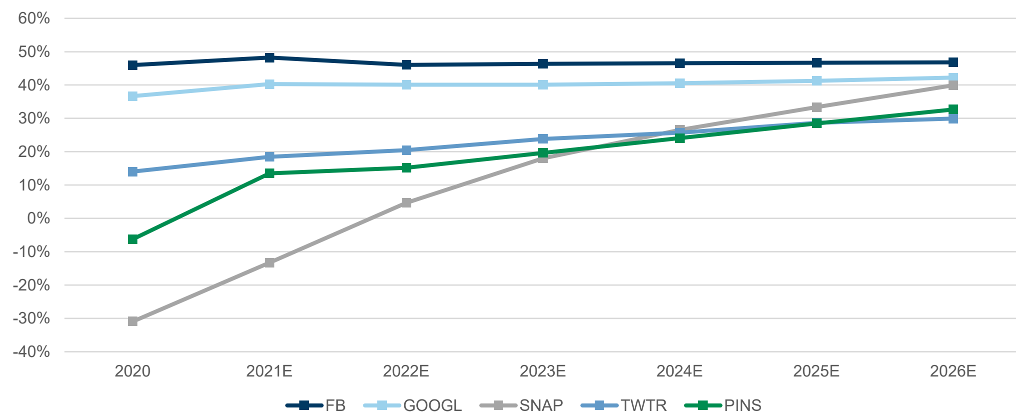
Source: Company data, Goldman Sachs Global Investment Research

Margin Trajectory

In terms of margin trajectory, there are many variables/idiosyncratic investments specific to each platform (which we discuss in greater detail in each respective company section). Overall, we'd categorize our view on company margin trajectories into two broader buckets: a) large cap incumbents (Alphabet & Facebook) with generally ~stable-to-modestly-improving core advertising margins (with key drivers being ad price inflation, content acquisition/revenue share costs, depreciation flow-through from heightened capex spend & continued investments in long-tailed opportunities [AR/VR, hardware, Other Bets, etc.]); and b) smaller emerging platforms (Twitter, Snap & Pinterest) with significant margin improvement as strong topline/monetization growth outpaces specific idiosyncratic investments to support future monetization (e.g.

Discovery, Spotlight, int'l for Snap; shopping/Catalogs, Ideas Pins, int'l for Pinterest; DR for Twitter, etc.).

Exhibit 42: Digital Advertising GAAP EBITDA Margins
%, '20-'26



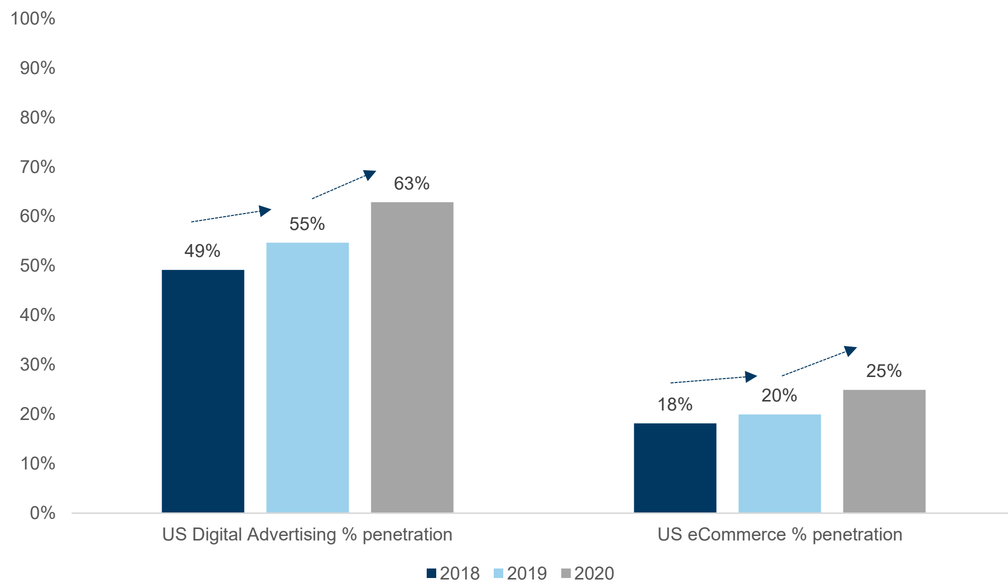
Source: Company data, Goldman Sachs Global Investment Research

Key Debates & Drivers for the Subsector

How has COVID-19 impacted the digital penetration of advertising spend?

Out of necessity due to stay-at-home restrictions globally during COVID-19, the shift to digital for many consumer (& advertiser) behaviors saw an acceleration in 2020 vs. 2019 - online penetration of overall time spent, entertainment consumption, shopping/retail spend and paid advertising all saw multi-year increases during 2020. We view this shift to digital as a "new normal" for user & advertiser behavior and, albeit not at the same accelerated rate as 2020, expect online penetration to steadily increase in the coming years.

Exhibit 43: US Digital Advertising & eCommerce Penetration
Digital penetration of both US advertising & retail spend saw a multi-year acceleration in 2020 over 2019



Digital advertising represents % penetration of traditional ad spend only (does not include marketing services)

Source: eMarketer, Census Bureau, Goldman Sachs Global Investment Research

How will the mix of brand vs. direct-response spend change over the next several years?

Similar to the shift of user and advertiser behavior from offline to digital channels, the shift of ad budgets from brand to performance/direct-response spend saw a significant acceleration in 2020 driven by COVID-19. While this trend has been occurring for a number of years, COVID-19 highlighted the need for ad spend to be more targeted, measurable & to drive direct conversion (notably, direct-response spend led the majority of the recovery of digital ad spend in 2020, while higher-funnel brand spend was much slower to return). At the same time, a combination of platform innovation around product & ad formats (enabling hyper-targeting and specific goal-based bidding strategies at greater scale) and advertiser budgets shifting "down-funnel" has caused a blurring of lines between traditionally-siloed brand and direct-response spend, as budgets in digital channels are deployed with increasingly specific goals, audience targeting and ROAS targets. Finally, as engagement continues to shift toward digital channels (social, online video, streaming, etc.), digital platforms are increasingly able to offer targeting at scale, eroding the historical scale benefits of TV & other linear channels. That being said, one caveat is that we view some traditional media platforms (e.g. linear broadcast and cable TV) as well-positioned to also capture increasing spend in certain newer channels (e.g. connected TV, streaming video) as these channels continue to gain traction with users and advertisers. Our industry work indicates that these platforms have recently seen success replacing some linear video inventory with digital inventory and improving targeting, measurement & attribution capabilities as a result.

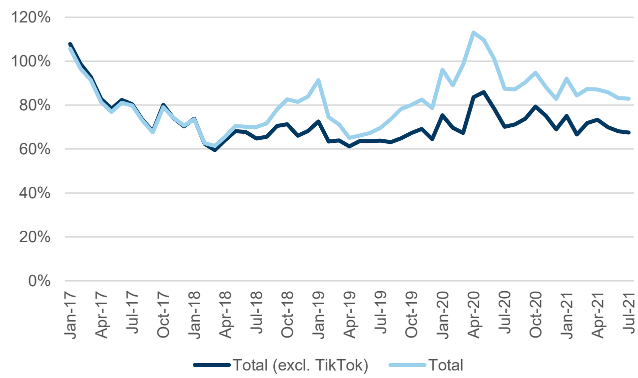
How will a mix of impressions vs. pricing drive forward ad revenue growth for the

subsector?

The mix of impressions vs. price as a driver of forward ad revenue growth will be an evolving debate over time: on one hand, digital platforms continue to mature (especially in developed regions) with ad load naturally increasing, limiting pure impressions growth as a driver of ad revenues; while on the other hand, steady user/engagement growth in developing regions combined with new on-platform surfaces to monetize (e.g. short-form video, shopping features, etc.) will lead to increased ad inventory. Overall, our forward ad revenue growth estimates for the major social media platforms are primarily driven by ARPU growth (over impressions growth) - for illustration, Exhibit 45 shows our estimated '21-'26 CAGR for users (as a proxy for impressions) and advertising ARPU (as a proxy for pricing). We expect a mix of growing advertiser bases/depth of auction, innovation around new ad formats and the shift to DR over brand (including new targeting, measurement & attribution capabilities) to drive steady price inflation across the digital platforms. This should have a positive overall impact to margins as pricing mostly flows through to platforms' bottom lines.

Exhibit 44: Total US Monthly App Downloads for Digital Ad Platforms (% of 2016)

Since 2018, monthly US downloads have decelerated to ~60-80% of 2016 levels

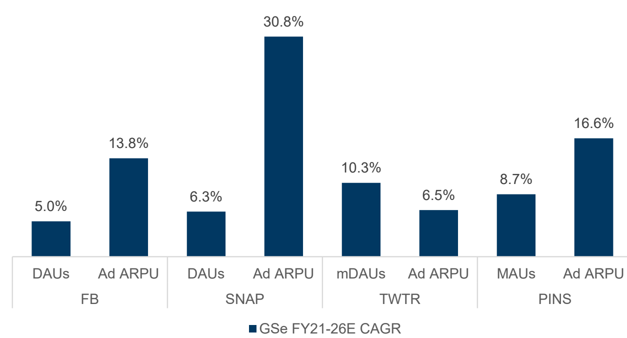


Represents total US monthly downloads of comp group as a % of 2016 monthly downloads; Comp group includes Facebook, Instagram, YouTube, Twitter, Snapchat, Pinterest & TikTok; includes both iOS and Android

Source: SensorTower, Goldman Sachs Global Investment Research

Exhibit 45: GSe Social Media User vs. ARPU CAGR ('21-26)

Our forward revenue growth estimates are driven primarily by ARPU growth (over user growth) in the coming years



Represents total global users & advertising revenue per user; average of quarterly estimates

Source: Company data, Goldman Sachs Global Investment Research

Which platform(s) are best positioned to capitalize on the "blurring of lines" between traditional advertising & eCommerce business models?

As discussed in more detail in our 10 Themes section, the blurring of lines between traditional advertising and eCommerce business models has been a multi-year trend for the sector, which we expect to accelerate in the coming years. Digital ad platforms continue to innovate around direct checkout and other social commerce-oriented products fueled by several factors, including: a) a steady shift of user browsing/shopping behavior to online channels (accelerated due to COVID-19); b) enhanced scrutiny around data privacy/collection increasing the importance of on-site conversion; and c) advertiser/retailer desire for higher conversions & ROAS. At the same time, eCommerce platforms continue to build out their advertising offerings, with Amazon leading the way - we view Amazon as well positioned to continue to capture increasing share of digital advertising spend driven by its scaled 1P data, existing advertiser/retailer base, unique shopping intent of users & diversified ad formats across product search, display, video and broader digital media (Amazon Video, Fire TV, IMDbTV, etc.).

How will data privacy headwinds impact the digital ad landscape in the coming years?

Over the past several years there has been increasing scrutiny around data privacy, with developments by both regulators (GDPR, CCPA) and third-party platforms (Apple's ITP & ATT, Google's Privacy Sandbox & Chrome browser changes) to help enhance user privacy and limit data collection. We'd summarize our view on these changes & potential impact to the digital ad ecosystem with a few key takeaways:

- Overall, these changes have been slower to roll out than initial investor expectations - recent commentary from the digital ad platforms indicate that the most significant impacts from Apple's ATT changes will come in 2H '21 (rather than in Q2 '21 as previously expected), while Google has delayed the phase-out of support for third-party cookies on its Chrome browser several times to give advertisers/platforms more time to prepare.
- The continued phase-out of third-party tracking capabilities (& broader industry trend toward greater privacy) emphasize the importance of having access to scaled first-party data. In our view, the platforms with access to 1P data are best positioned in an IDFA/cookie-less environment given their ability to offer relatively better reach, targeting & measurement/attribution.
- These changes will likely negatively impact ROIs on certain platforms over the short-term (as absolute levels of audience targeting & measurement/attribution are impacted). Over the long-term, however, we expect relative ROIs on digital to still exceed most other channels (linear, etc.). We therefore expect digital platforms to be able to largely outpace these headwinds, and may actually benefit from relative ad spend share gains over the long-term due to lack of alternative options at scale (our industry contacts have noted that, for example, pricing for iOS ads on Facebook and Amazon have significantly increased in recent months, in part due to higher advertiser demand for these platforms' relative scale, targeting & measurement/attribution capabilities in a more privacy-centric environment).
- Over the long-term, the importance of on-site conversion (e.g. social commerce/checkout initiatives) is further emphasized as Apple's ATT and other third-party platform changes limit cross-device/cross-platform tracking (impacting off-site conversion attribution). Specifically, Facebook management has highlighted the importance of on-site conversion (including through Shops/Checkout, click-to-message ads, etc.) as a long-term strategy to help mitigate privacy headwinds on the company's recent earnings calls.

Overall, we view the mega-cap platforms (GOOGL, FB & AMZN) as best positioned to manage these industry headwinds given their access to scaled 1P, existing advertiser base & depth of auctions & diversified inventory across multiple platforms (search, social, video, etc.). Specific to FB, while it remains the platform most exposed to Apple's ATT changes, we believe they are still well-positioned to manage the potential impact given their superior alternatives available to advertisers (contextual targeting, etc.) & ability to capture more on-site conversion over time.

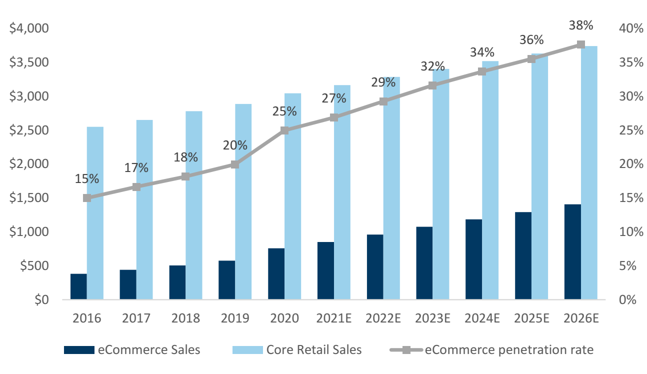
eCommerce

TAM & Market Sizing

The rapid acceleration of eCommerce and all classes of online retail during COVID and related mobility restrictions globally has driven several years' worth of consumer adoption. As restrictions ease, investors are focused on the sustainability of eCommerce penetration and continued growth post-COVID. We see a long runway for eCommerce penetration to continue to increase even as the economy reopens, as consumer shopping habits are sticky and the convenience of eCommerce remains an important value proposition. Furthermore, eCommerce companies will retain the processing and logistics infrastructure they built for high volumes during COVID, which should translate into faster delivery times and other consumer benefits.

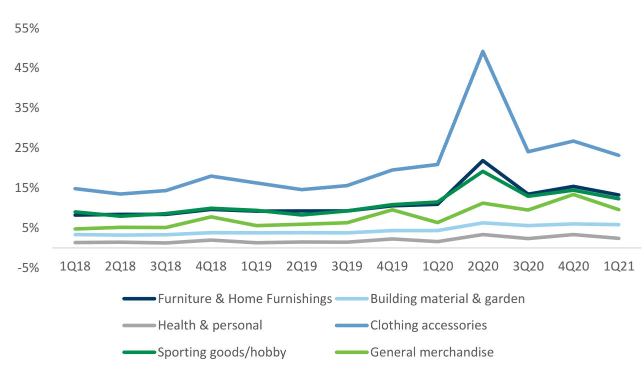
We forecast US eCommerce sales to reach 38% of total core retail (excluding autos, gas and food) by 2026 (Exhibit 46), with penetration levels increasing by roughly 200bps each year and growing from a ~$750bn market in 2020 to ~$1.4tn market in 2026 in the US. For reference, eCommerce penetration increased ~500bps in 2020, compared to an average of ~150bps per year pre-COVID, according to data from the US Census Bureau. On a category level, clothing and accessories saw the largest spike of eCommerce share gain in 2Q20, reaching close to 50% of all clothing/accessories retail sales. Since 2Q20, all categories' eCommerce penetration levels have declined sequentially (Exhibit 47), although notably holding well above pre-pandemic levels. For example, while home and home furnishings eCommerce as a % of retail sales has come down from a peak of 21.9% in 2Q20, the 13.3% in 1Q21 is still over 200bps above 1Q20 levels and over 300bps above 1Q19 levels.

Exhibit 46: eCommerce and Core Retail Sales
$bn, '16-'26



Source: US Census Bureau, Goldman Sachs Global Investment Research

Exhibit 47: eCommerce online penetration by Census Bureau category



Source: US Census Bureau

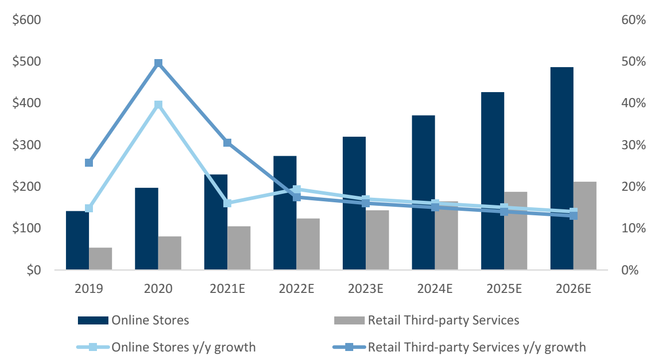
Revenue Growth

In terms of revenue growth, we model Amazon growing Online Stores revenue from $229bn in 2021 to $486bn in 2026 (~16% '21-'26 CAGR), which consists of Amazon's first party (1P) retail business. We model Retail Third-party Services (the 3P business) to grow at a similar CAGR of 16% '21-'26 (Exhibit 48). On a units basis, we are expecting

3P to continue to become a larger % of Amazon's business as 3P units as a % of total units on Amazon have been increasing for the past 5 quarters. The company has benefited from third party retail growth given the lower inventory risk for Amazon, benefits of third party competition driving pricing benefits for consumers and continued strength of FBA adoption. On the 1P side, Amazon's efforts in developing private label products (AmazonBasics etc.) should also help generate growth. This compares to our estimates for eBay, which assumes GMV grows from $86bn in 2021 to $99bn in 2026 (~3% '21-'26 CAGR) and revenue growing from $10.4bn to $12.7bn (~4% '21-'26 CAGR) over the same time period.

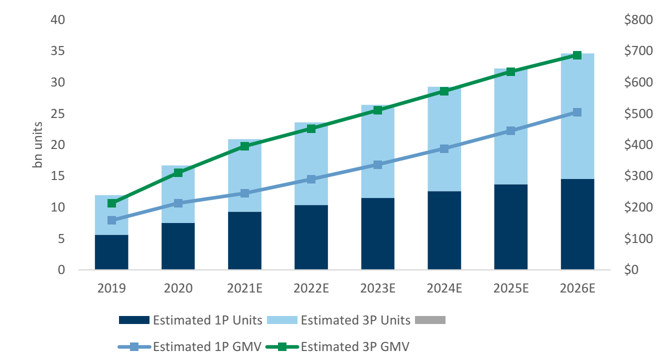
In terms of market share, we think Amazon's share of the US eCommerce market will stabilize between 35-36% as a function of its size and a growing set of vertical competitors in eCommerce, including traditional retailers (Walmart, Costco etc.) growing their online commerce presence. We expect eBay's market share to fall from 4.5% in 2021 to 2.9% by 2026 given the slower growth rate of the core eBay marketplace.

Exhibit 48: Amazon Online Stores and Retail Third-party Services growth
$bn, '19-'26



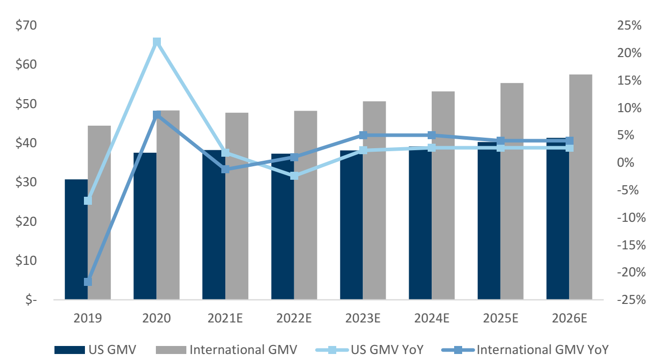
Source: Company data, Goldman Sachs Global Investment Research

Exhibit 49: Amazon 1P/3P Units and GMV estimates
$bn, '19-'26



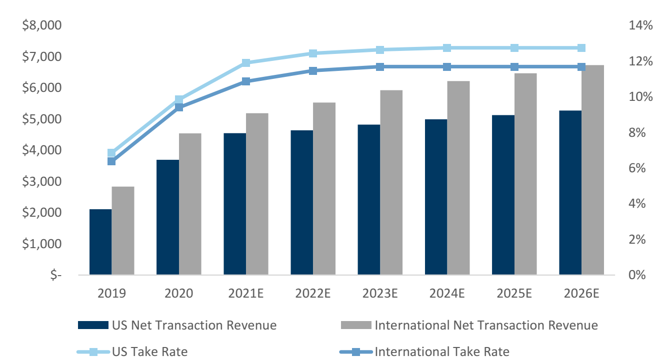
Source: Company data, Goldman Sachs Global Investment Research

Exhibit 50: eBay US and International GMV
$bn, '19-'26



Source: Company data, Goldman Sachs Global Investment Research

Exhibit 51: eBay US and International Revenue and Take Rate
$mm, '19-'26

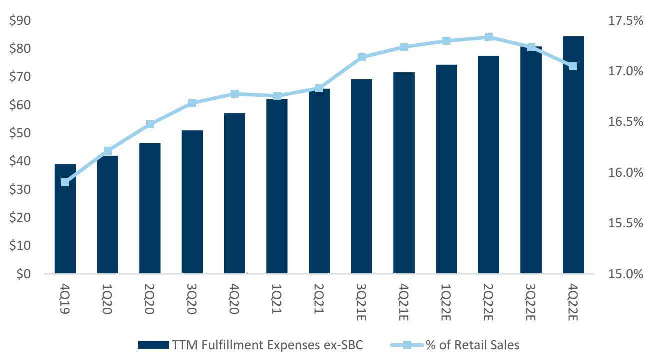


Source: Company data, Goldman Sachs Global Investment Research

Margin Trajectory

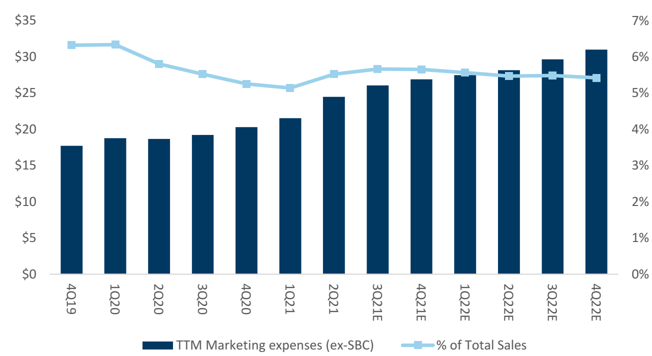
The US eCommerce market saw margins expand during COVID from leverage across operating expenses as volumes spiked, particularly in 2Q20. Although companies incurred expenses related to COVID, including on-site testing and capacity restrictions for fulfillment centers, pullback in marketing costs (Exhibit 53) and reduced lease/travel expenses more than offset COVID-related costs for most. As consumer behavior normalizes and other service industries increasingly compete with eCommerce companies for labor, Amazon is already seeing deleverage on fulfillment expenses ex-SBC: 18.3% of retail sales (total Amazon sales minus AWS) in 2Q21, compared to 17.0% in 2Q20 and 16.2% in 2Q19. On their 2Q21 earnings call, Amazon management spoke to wage pressure in the labor market and the increased spending on incentives being the biggest contributor to inflationary pressures in the business. We expect to see the same dynamic across other eCommerce companies over the next few quarters, although we do not expect this to have a long-term impact on industry margins which should continue to expand as eCommerce adoption increases and margins benefit from volume and scale.

Exhibit 52: Amazon TTM fulfillment expenses ex-SBC
$bn, 4Q19 - 4Q22



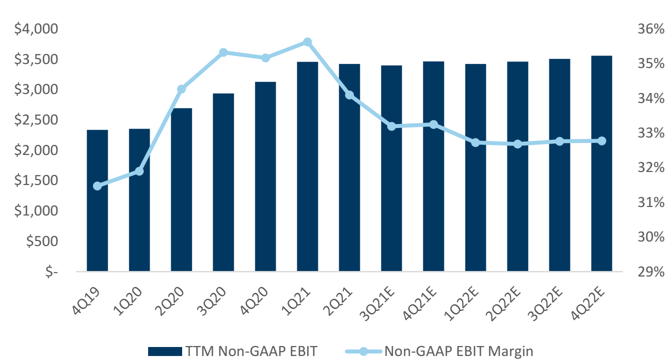
Source: Company data, Goldman Sachs Global Investment Research

Exhibit 53: Amazon TTM Marketing expenses (ex-SBC)
$bn, 4Q19-4Q22



Source: Company data, Goldman Sachs Global Investment Research

Exhibit 54: eBay Non-GAAP EBIT and margin
$mm, 4Q19-4Q22



Source: Company data, Goldman Sachs Global Investment Research

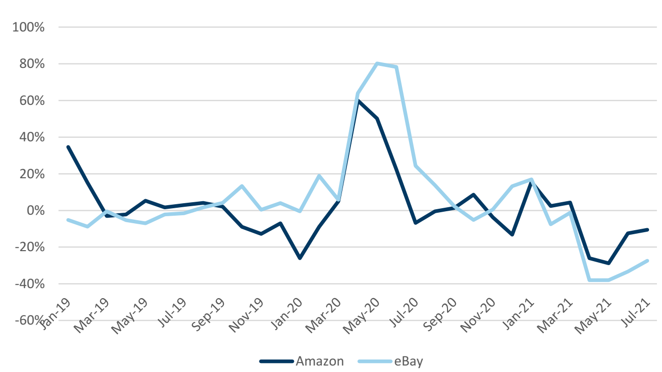
Key Debates & Drivers for the Subsector

How did COVID shift the penetration curve and is it permanent?

While the macro environment around COVID and mobility restrictions continue to shift in the US and elsewhere - variants, mask mandates, vaccination rates all influencing the state of reopening - eCommerce companies have generally seen new cohorts of customers acquired during lockdown exhibit similar behavior to older cohorts. Several management teams have called out stable customer engagement and purchase frequency even as restrictions eased and people went outside, albeit with YoY growth figures for customer adds and volume increases slowing down from a tough comp. On their 2Q21 earnings call, Amazon noted that Prime member purchases still grew YoY on a per Prime member basis even though rates were starting to moderate in the quarter. Etsy's CFO, on their 2Q21 earnings call, emphasized that all signs have so far indicated that buyers acquired during COVID are at least as valuable as those acquired pre-COVID, and that cohorts are showing stable underlying trends. We will continue to watch for app downloads trends (Exhibit 55), which have so far showed a decline YoY in downloads for Amazon and eBay apps in the US, signaling the slowing of incremental user adds but still large numbers of new downloads on an absolute basis.

Additionally, traditional retailers have made a big push into eCommerce during 2020, and GS Retail team estimates that digital penetration for select retailers in 2020E, including Walmart and Target, was on average ~2x what it was in 2019. Specifically, Walmart's eCommerce business has become an increasingly large contributor to overall quarterly comp growth. We think that the build out of these digital channels and the consumer expectation for eCommerce access across almost all retail products will drive a permanent shift in eCommerce adoption.

Exhibit 55: Amazon and eBay app downloads in the US by month
YoY growth, '19-'21

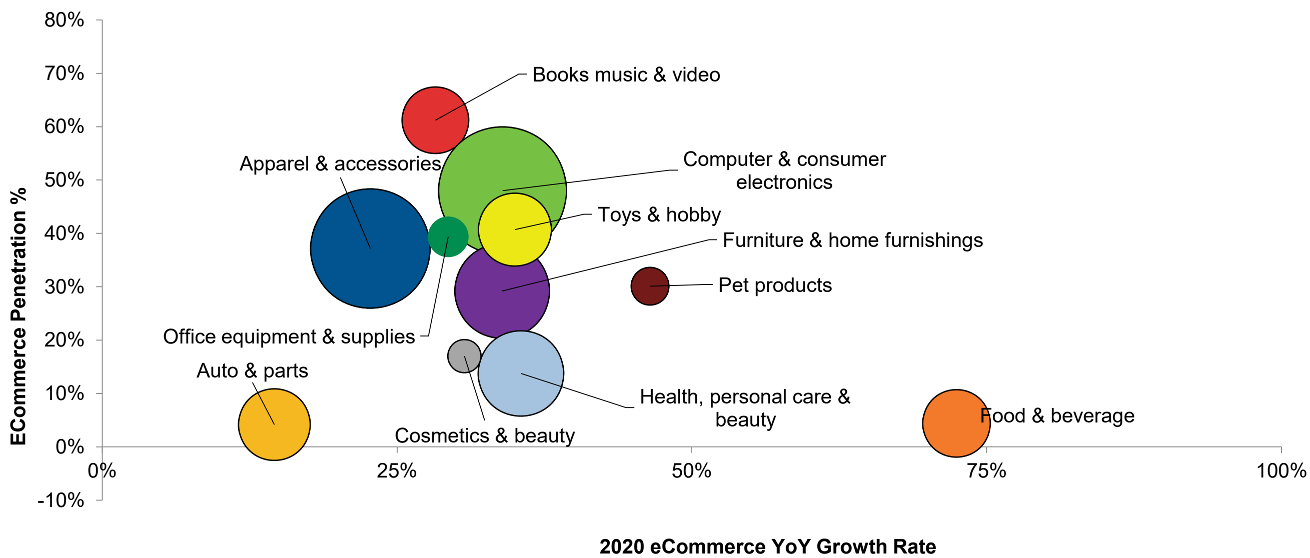


Source: Sensor Tower

What categories will move the needle for industry growth?

Among the low-penetration categories for eCommerce, we think the biggest opportunities lie in CPG (discussed in detail in GS Merchant-Media report), groceries, health personal care and beauty, and furniture & home furnishings from a TAM perspective. Each of these categories have historically faced different barriers to eCommerce adoption, such as delivery speed for groceries, customization for health and beauty, and large-item logistics for home furnishings. However, we now see different companies emerging in each of these categories with capabilities to address these obstacles, and we watch for those that are able to continue to capture market share in the shift from offline to online in these areas.

Exhibit 56: By Category eCommerce growth, penetration and relative $ size

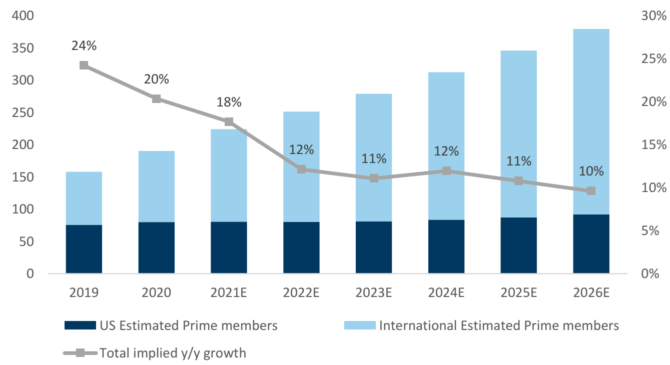


Source: eMarketer

How does the subscriptification of commerce impact shopping patterns?

Outside of Amazon Prime, subscriptions have traditionally existed for many large offline retailers such as Costco memberships, the more recently launched Walmart Plus and Albertsons' FreshPass delivery subscription. Subscription programs serve multiple functions for these companies: 1) increase loyalty and engagement among customers; 2) incentivize larger dollar order values, as most free deliveries included in subscriptions have a minimum order value; and 3) lock in recurring revenue. Several companies have called out subscription members purchasing more frequently (Amazon Prime, for example, in their 2Q21 earnings call) and showing higher engagement. We see the rise of subscriptions consolidating shopping behavior (especially sealed bulk household spending), leading to consolidation around a few large players. Increasing competition in the grocery space, for example, between retailers' programs as well as third-party subscriptions appears to serve mostly the same function for consumers, and we see consumers ultimately retaining only one or two in the long term. We hold largely the same view for other categories - clothing and accessories, food delivery, pet products etc.

Exhibit 57: Amazon estimated Prime members by geography
mm, '19-'26

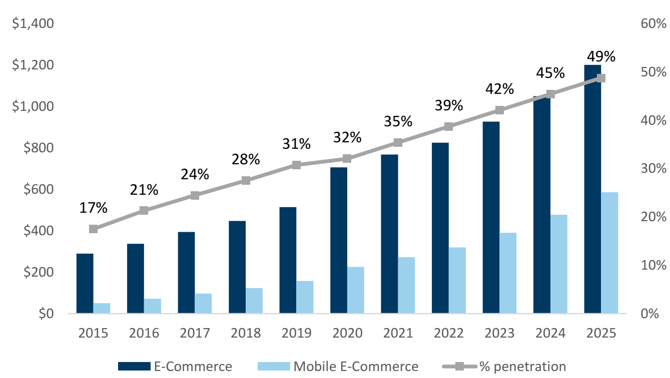


Source: Goldman Sachs Global Investment Research

The rise of social and video shopping?

At the same time that digital advertising platforms develop eCommerce functions (Instagram, Pinterest, Tiktok etc.), eCommerce players have been making their own push into video formats, with Amazon calling out the rapid adoption of video creative format for sponsored brands in their 1Q21 earnings call. As mobile commerce continues to gain share within eCommerce (Exhibit 58), we expect short form video to gain more traction with brand advertisers, driven by 1) level of creativity of video ads 2) high engagement from users 3) effectiveness of video formats at conveying brand-related messages. We also see platforms developing more mobile-native ad formats as more eCommerce dollars run through mobile apps and mobile-accessed websites directly.

Exhibit 58: Mobile eCommerce as a % of total eCommerce
$mm,'15-'25



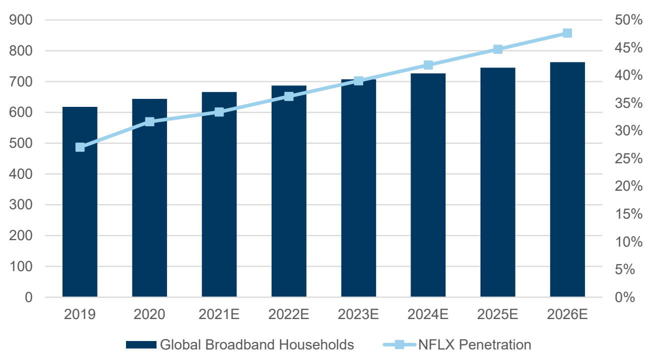
Source: Euromonitor

Streaming Media

TAM & Market Sizing

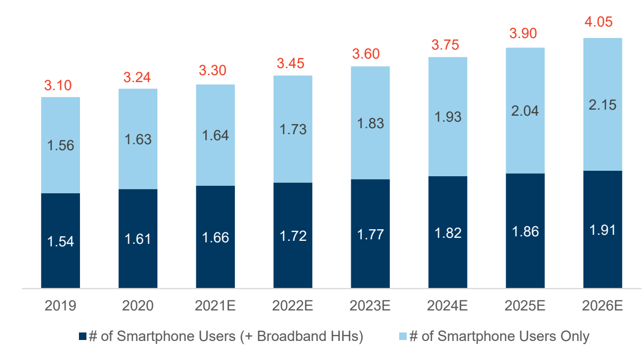
As streaming media laps a year of heightened media consumption and subscriber growth (due to COVID-19 related restrictions), a key debate for investors remains around the subscriber net add trajectory. Looking ahead, we still see ample runway for streaming platforms to grow their user base (even despite the growing number of competitor offerings in the market). With Netflix recently rolling out its mobile-only plan to 70+ countries, we segment Netflix's total addressable market by: (1) global broadband households; & (2) number of smartphone users not included in broadband households. Based on data from Kagan, the number of global broadband households was ~644mm in 2020 with Netflix 32% penetrated. We forecast a 3% 5-yr CAGR ('21-'26), amounting to ~763mm global broadband households by 2026. Within this, we expect Netflix will be able to reach nearly 50% penetration levels by 2026. Assuming that there are roughly 2.5 smartphone users per broadband household, we arrive at ~1.6bn smartphone users who do not live in a broadband household (ex-China) in 2020 growing to ~2.2bn by 2026, further highlighting Netflix's vast opportunity ahead.

Exhibit 59: Global Broadband Households ex-China & Netflix Penetration
mm, '19-'26



Source: Company data, Goldman Sachs Global Investment Research, Kagan

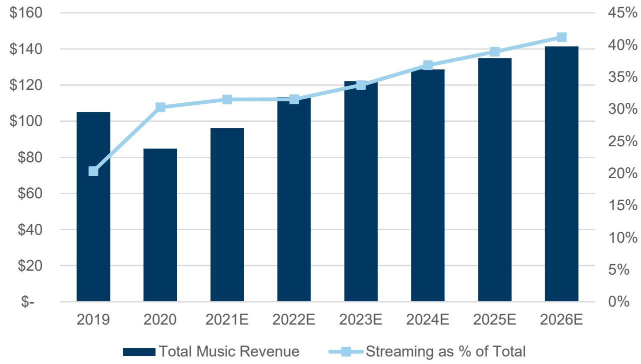
Exhibit 60: Smartphone Users
bn, '19- '26



Source: Gartner, IDC, Goldman Sachs Global Investment Research

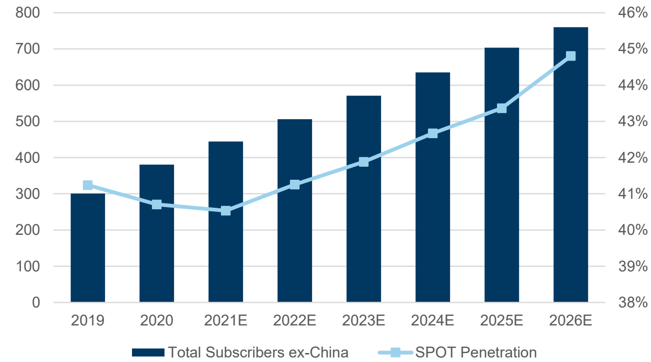
Based on the Goldman Sachs Research analysis in the annual Music in the Air report (link), total music revenue is expected to grow at an 8% 5-yr CAGR ('21-'26) to $141bn by 2026. Within that, streaming music represents ~30% of total music revenue (as of 2020) with expectations to grow to ~41% by 2026 driven by total paid subscribers (ex-China) growing at an 11% 5-yr CAGR ('21-'26) to 760mm and ad-supported users growing at a 9% 5-yr CAGR ('21-'26) to ~3.4bn. Against this backdrop, Spotify is the market leader with ~41% market share of total subscribers (ex-China).

Exhibit 61: Total Music Revenue (ex-Radio) & Streaming Music Penetration
$bn, '19-'26



Source: Company data, Goldman Sachs Global Investment Research, IFPI Global Music Report 2021, Music & Copyright, OMDIA, PWC

Exhibit 62: Paid Users & Spotify Penetration (%)
mm, '19-'26

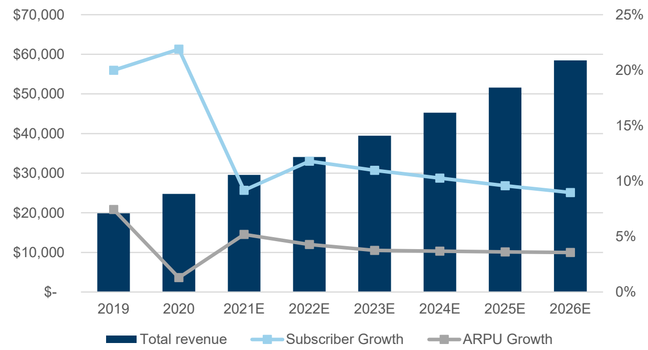


Source: Company data, Goldman Sachs Global Investment Research, IFPI Global Music Report 2021, Music & Copyright, OMDIA, PWC

Revenue Growth

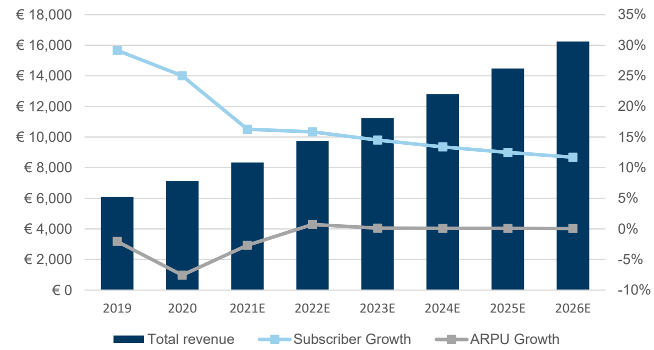
In terms of revenue growth (from subscriptions), we model Netflix growing streaming revenue from $29.5bn in 2021 to $57.3bn in 2026 (14% '21-'26 CAGR) reflecting subscribers growing at a 10% CAGR ('21-'26) and ARPU at ~4% over the same time period. This compares to our estimates for Spotify, which assumes premium revenue grows from €8.3bn in 2021 to €16.2bn in 2026 (14% '21-'26 CAGR) reflecting premium subscribers growing at a 14% CAGR ('21-'26) and ARPU at 0% over the same time period. In looking at the underlying subscriber base of Netflix and Spotify, both companies have exhibited deep levels of penetration in developed markets. That said, we believe both companies will focus on scaling their presence in emerging markets (Spotify announced launching in 85 new markets in February and Netflix recently announced the expansion of mobile-only plans in emerging markets). With this assumption, we model a certain degree of ARPU pressure as companies price plans to be competitive within certain markets. However, we believe Netflix will have more pricing power going forward given: (1) the heterogeneity of video vs. the homogeneity of music; (2) streaming video displacing a larger wallet size vs. streaming music (e.g., replacing monthly cable bill vs. ad-supported streams on YouTube / piracy issues); & (3) historical precedence of Netflix raising prices every ~18-24 months as they deliver more value to consumers. While Spotify has recently raised prices in certain markets (link), we expect the main source of forward growth (in terms of pricing power) to come from multi-user plans (given the price per user of those plans vs. individual plans).

Exhibit 63: Netflix Revenue and Subscriber & ARPU Growth
$mm, '19-'26



Source: Company data, Goldman Sachs Global Investment Research

Exhibit 64: Spotify Revenue and Subscriber & ARPU Growth
€mm, '19-'26



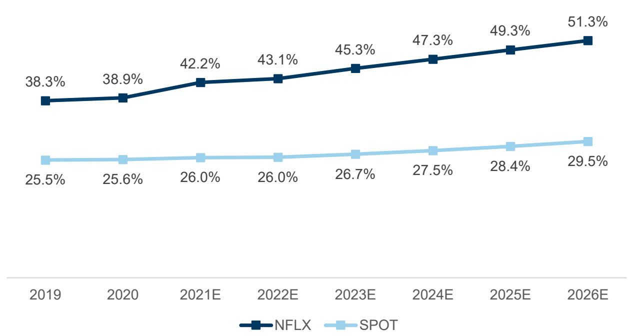
Source: Company data, Goldman Sachs Global Investment Research

Going forward, we do not expect Netflix will develop an ad-supported tier but see Spotify focused on growing its advertising business as it develops & enhances its advertising tools, grows its user base, and expands into owned & original content via podcasts. We model Spotify growing ad-supported revenue from €1.1bn in 2021 to €4.1bn in 2026 (~29% '21-'26 CAGR) reflecting ad-supported users growing at a 15% CAGR ('21-'26) and ad-supported ARPU at 12% over the same time period.

Margin Trajectory

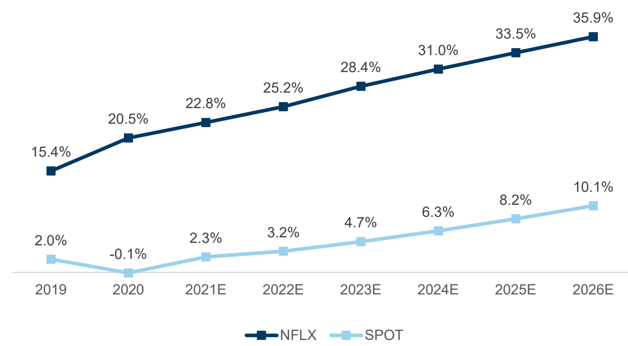
Looking at the margin trajectory, we expect Netflix Adj. EBITDA margin to expand from 22.8% in 2021 to 35.9% in 2026 and expect Spotify Adj. EBITDA margin to expand from 2.3% in 2021 to 10.1% in 2026. The main difference in margin trajectory stems from the following: (1) Spotify is required to pay out ~65% of revenues for performance, mechanical, and recording royalties (all of which are variable costs tied to its streaming music business); (2) Spotify's significant investments in podcasts (which are accounted for in the ad-supported segment); & (3) Netflix's level of scale translating into leverage on its content spend (as it has shifted from a strategy centered around licensed content to produced content). That said, Spotify's margin profile in out-years is centered around its ability to execute on its podcast strategy & marketplace investments (which we further discuss below).

Exhibit 65: Netflix & Spotify Gross Margin
%, '19-'26



Source: Company data, Goldman Sachs Global Investment Research

Exhibit 66: Netflix & Spotify Adj. EBITDA Margin
%, '19-'26



Source: Company data, Goldman Sachs Global Investment Research

Key Debates & Drivers for the Subsector

How will streaming media platforms' recent investments materialize over the long-term?

In an effort to mitigate increasing levels of competitive intensity while also delivering more value to the consumer, both Netflix and Spotify have started focusing on expanding their content offering largely in the form of:

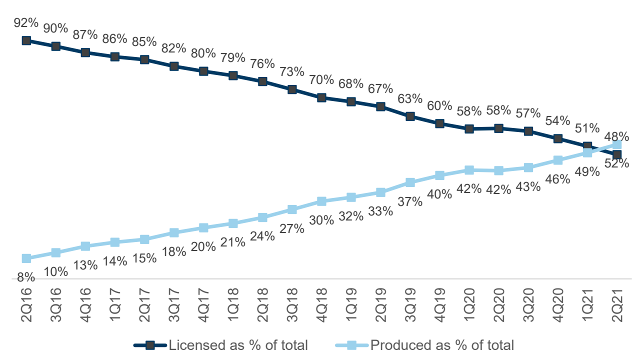
- **Documentaries, Comedy, Gaming (NFLX)** - A key turning point in Netflix's evolution as a streaming media platform was in 2012 when the company made the decision to pivot from licensed content to produced content. While the content was originally centered around TV series, Netflix has since expanded to films, documentaries, comedy, and more recently gaming. Historically, management has called out gaming as a competitor for media consumption so Netflix's decision to include gaming within the subscription is a logical solution in driving more engagement on their platform. While these investments may potentially result in higher engagement, higher retention, user base expansion, & potential for pricing power over time, we note that other large-scaled platforms have faced significant challenges related to gaming initiatives. That said, long-term optionality exists around the potential for live streaming of video games (which has significantly accelerated during the pandemic).
- **Podcasts (SPOT)** - Since 2019, Spotify has been very focused on transitioning the streaming music business towards a global audio platform, mainly in the form of podcast investments and development of its marketplace & advertising. With 2/3 of Spotify's unit economics paid out in the form of royalties, Spotify's long-term margin profile hinges on its ability to execute on advertising as well as its marketplace initiative. In the near-to-medium term, we expect Spotify to continue to invest against the long-term opportunity and expect these investments to materialize to some degree over the long-term (e.g., Spotify has already announced plans to apply a 5% fee for access to podcast creator tools in 2023). However, we model Spotify's ad-supported segment as a percentage of overall revenue growing to 20% by 2026 (vs. management's long-term target of 20-40%), resulting in our overall gross margin

estimate of 29.5% in 2026 (vs. management's long-term target of 30-40%).

How does original and local language content act as a factor in terms of differentiation?

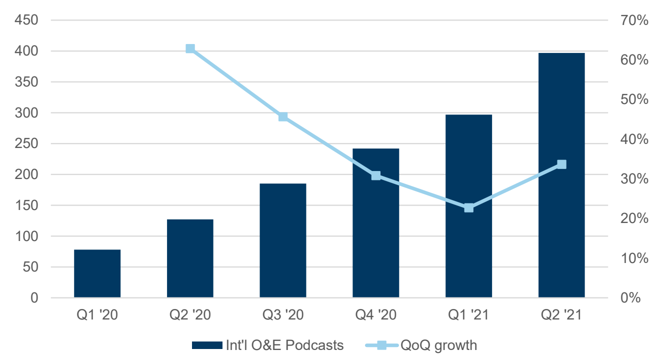
Over the past few years traditional media companies have started launching their own streaming services resulting in rising content costs in the US and heightened competition in terms of acquiring new domestic users. That said, platforms have started pivoting towards producing original and local language content as a way to differentiate their product offering while also realizing lower content costs internationally (e.g., Lupin, Dark, Money Heist, etc.). As can be seen below, Netflix has significantly narrowed the gap in terms of produced vs. licensed content, yet it is still roughly evenly split. That said, we expect Netflix (in addition to other streaming services) will continue to invest in original & local content - management has discussed plans to release one original film per week in 2021 and has also commented on expanding investment in local language (e.g., released 100 seasons of local language to date in Q3 '19 and had plans for 130+ in 2020). Similarly, Spotify has also been recently investing against original and exclusive (O&E) content, more than doubling international O&E content over the past year. While original & exclusive content is still a small percentage of overall podcasts on the platform, management has commented that it accounts for ~20% of total consumption. Going forward, we expect Spotify will continue to invest in O&E content as a way to drive higher levels of engagement & retention, acquire new users, & convert existing users to podcast listeners while also delivering an attractive value proposition for advertisers.

Exhibit 67: Netflix Produced & Licensed Content
%, Q2 '16 - Q2 '21



Source: Company data, Goldman Sachs Global Investment Research

Exhibit 68: Spotify Int'l Original & Exclusive (O&E) Podcasts
Q1 '20 - Q2 '21



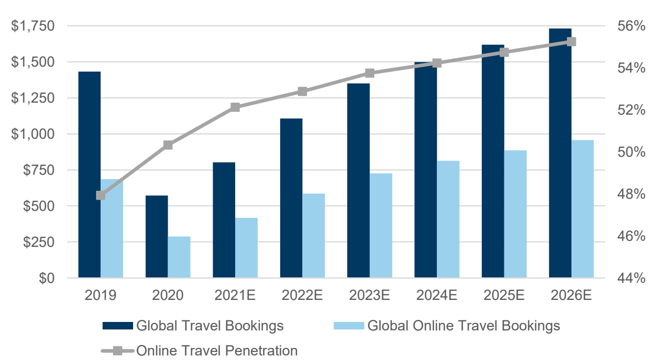
Source: Company data, Goldman Sachs Global Investment Research

Online Travel

TAM & Market Sizing

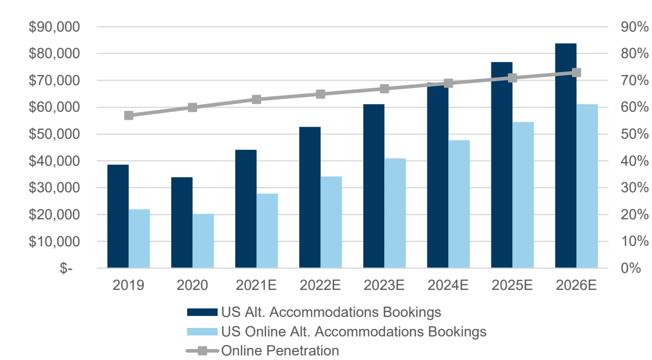
We expect size of the global travel industry to reach ~$1.7tn by 2026 (ex-alternative accommodations), of which online travel bookings will represent ~$950bn or ~55% market share (from ~48% in 2019). By region, we expect growth rates for online bookings in APAC & LatAm to outpace the US and Europe as penetration levels gradually converge with more mature online travel regions of the world. While we believe structural online room night growth is somewhere in the high-single-digit/low-double-digit range on a normalized basis, we still see pockets of opportunity for global OTAs to benefit from growth in less penetrated regions & segments of travel. As it relates to alternative accommodations in the US, we expect total bookings to grow from ~$40bn in 2019 to ~$85bn in 2026, with online bookings growing penetration from ~57% to ~73% over the same time.

Exhibit 69: Global Travel TAM (ex-alternative accommodations)
$bn, '19-'26



Source: Phocuswright, Goldman Sachs Global Investment Research

Exhibit 70: US Alternative Accommodations TAM
$mm '19-'26

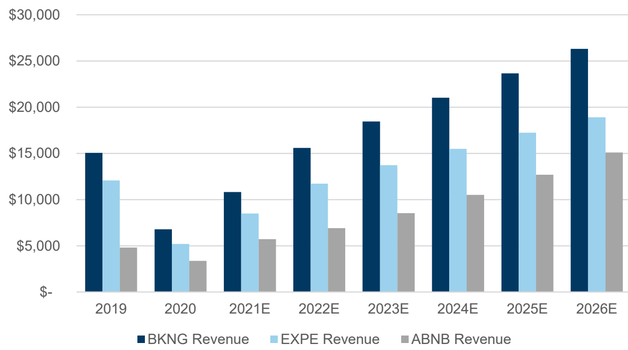


Source: Phocuswright, Goldman Sachs Global Investment Research

Revenue Growth

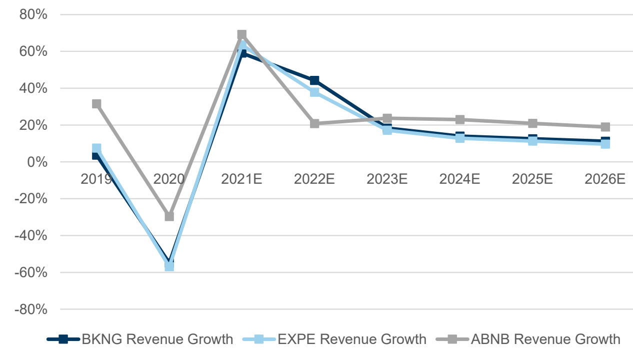
In terms of revenue growth, we assume Booking Holdings grows revenue from $10.8bn in 2021 to $26.3bn in 2026 (19% '21-'26 CAGR) with take rates generally stable in the mid-teens on a consolidated basis, reflecting lodging & "other" (incl. rental cars, experiences, etc.) take rates in the mid-to-high teens and air take rates in the low-single digits. This compares to our estimates for Expedia, which assume revenue grows from $8.5bn in 2021 to $18.9bn in 2026 (17% '21-'26 CAGR). Further, we expect Airbnb to grow revenue from $5.7bn in 2021 to $15.1bn in 2026 (21% '21-'26 CAGR).

Exhibit 71: Online Travel Agency Revenue
$mm, '19-'26



Source: Company data, Goldman Sachs Global Investment Research

Exhibit 72: Online Travel Agency Revenue Growth

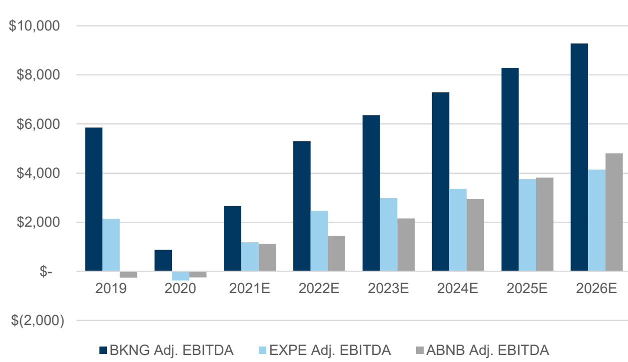


Source: Company data, Goldman Sachs Global Investment Research

Margin Trajectory

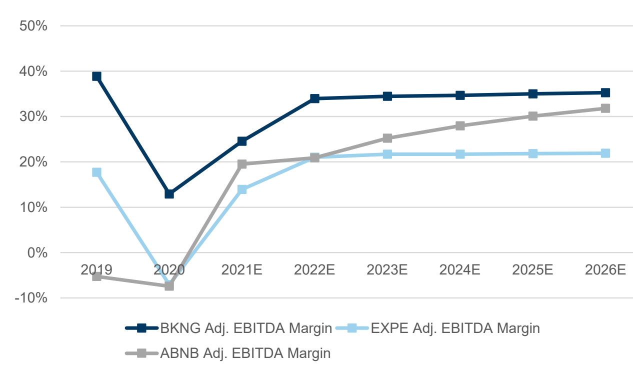
During the peak of COVID, each online travel agency was primarily focused on 2 things: 1) making sure they were well capitalized & 2) looked for areas to cut fixed costs from the business & gain efficiency on the variable parts of the cost structure. For example, Expedia has been executing against its plan to cut ~$750mm of fixed costs vs. 2019 exit rate (and $200mm+ in variable cost savings). Further, Airbnb reduced full-time headcount by ~25% (among other cost-cutting initiatives). In addition to these one-time cost reductions, all companies are making a push to achieve greater marketing efficiency by investing in brand advertising to drive more direct traffic. They are also trying to gain greater share of consumer travel spend by offering additional bookable segments (i.e. air travel, alternative accommodations, experiences, tours, activities, etc.). In doing so, they are hoping to increase the number of touch-points & frequency of use among users (i.e. the "connected trip") as a path to increase customer lifetime value vs. customer acquisition costs. While we acknowledge the vision of these companies to improve variable cost structures of their businesses, the travel industry has historically been characterized as marketing intensive and having a customer base that is generally less loyal to one particular brand.

Exhibit 73: Online Travel Agency Adj. EBITDA
$mm, '19-'26



Source: Company data, Goldman Sachs Global Investment Research

Exhibit 74: Online Travel Agency Adj. EBITDA Margins



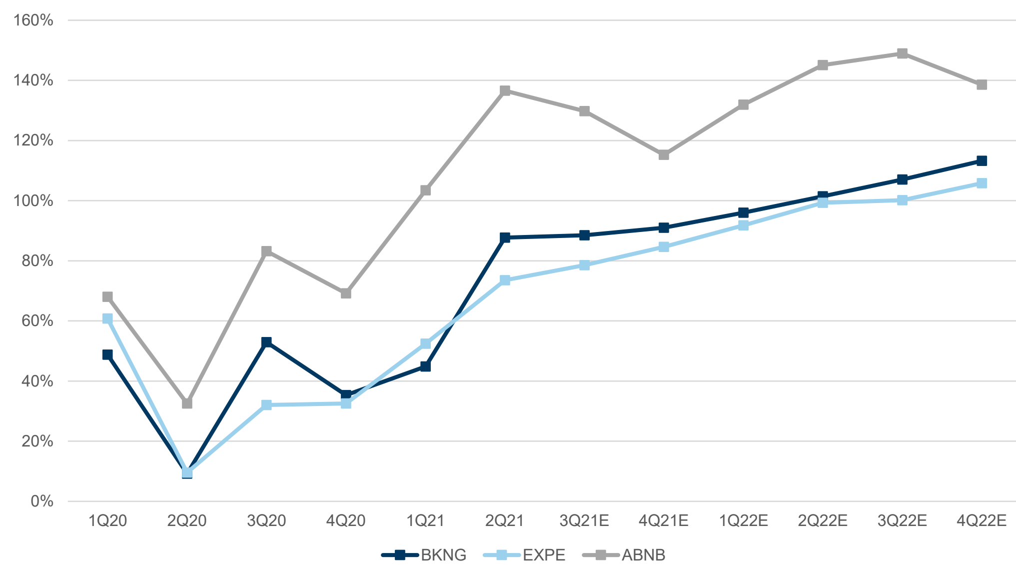
Source: Company data, Goldman Sachs Global Investment Research

Key Debates & Drivers for the Subsector

What does a "return to normal" look like and when do we get there?

One of the key debates among investors is figuring out when online travel demand returns to pre-COVID levels. We currently model Booking & Expedia gross bookings returning to 2019 levels in mid-2022. That said, Airbnb bookings have already surpassed 2019 levels as a result of the mix shift we've witnessed during COVID towards vacation rentals. Given incrementally more flexible work arrangements, pent-up demand for travel & continued mobility restrictions in parts of the world, we believe the recovery will continue to be driven by domestic leisure travel with continued strength in the alternative accommodations segment (though facing tougher comps going forward). The next big leg of strength in demand for OTAs is likely to come from a return of urban destinations & cross-border leisure travel, which will depend on COVID restrictions being lifted and how safe travelers feel.

Exhibit 75: Online Travel Agencey Bookings as % of 2019 Levels

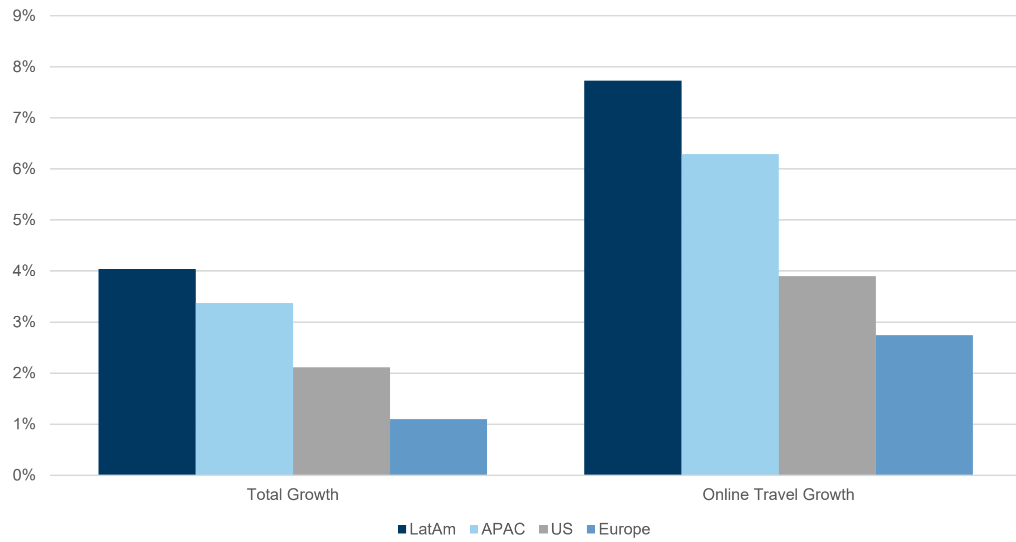


Source: Company data, Goldman Sachs Global Investment Research

Where are the opportunities to outrun growth for more mature end markets in online travel as we return to normal?

As we've noted, pre-COVID rates of growth in developed regions for the OTAs had settled in the high-single digit to low-double digit range. As such, companies have been looking for areas to supplement this growth and outrun the rates seen in more mature regions and segments of travel. We believe these areas of opportunity include: 1) taking share from each other in non-core developed markets (i.e. BKNG looking to grow in North America & EXPE looking to grow in Europe); 2) investing for growth in under penetrated regions (i.e. APAC, LatAm, etc.); 2) looking to "own more of the trip" by investing for growth in under penetrated or new segments of travel (i.e. local experiences, tours, activities, etc.); &/or 4) alternative accommodations.

Exhibit 76: Travel Growth by Region
'19-'26 CAGR



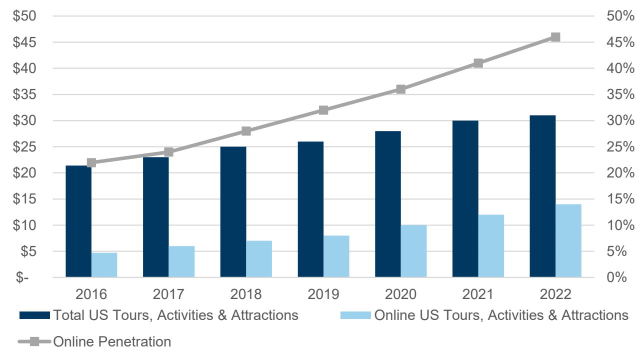
Growth in USD

Source: Phocuswright, Goldman Sachs Global Investment Research

Will shift to connected trip & attempting to drive more direct traffic be successful in improving margins?

Looking back pre-COVID, the online travel industry was one of increasing competitive intensity in a number of areas: 1) Alphabet continuing to drive product innovation in the online travel space as a means to gain greater share of travel industry advertiser budgets; 2) Airbnb's emergence as a scaled competitor & 3) hoteliers leaning into direct booking campaigns and additional performance advertising channels. This blurring of the lines of the travel funnel has resulted in all players looking to invest in brand advertising and other ways to drive greater levels of direct traffic and improve customer LTVs. That said, we believe performance advertising spend is likely to be neutral to negative for margins over the medium-to-long term. Further, while we recognize the opportunity in creating a flywheel of more diverse supply leading to higher frequency of use and customer LTVs, we do not currently underwrite rising margins as a direct result of this in our base case.

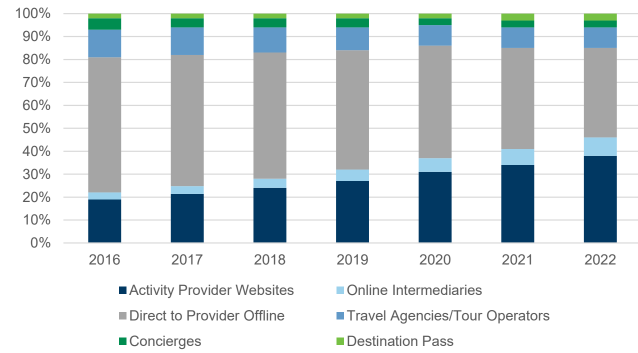
Exhibit 77: US Tours, Activities & Attractions TAM
$bn, '16-'22



Estimates were from pre-COVID Phocuswright report titled "Experiences 2019: US Travel Activities Market Opportunity & Consumer Behavior

Source: Phocuswright

Exhibit 78: US Tours, Activities & Attractions Bookings by Channel Share



Estimates were from pre-COVID Phocuswright report titled "Experiences 2019: US Travel Activities Market Opportunity & Consumer Behavior

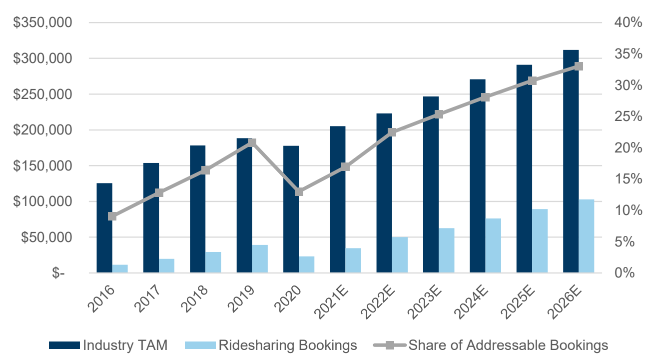
Source: Phocuswright

Ridesharing / Local Transportation

TAM & Market Sizing

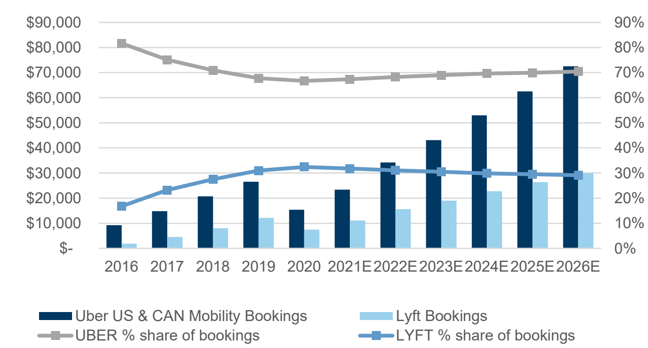
Uber has framed the long-term global personal mobility TAM at 11.9tn miles per year, which represents a $5.7tn market opportunity (across 175 countries). Looking more near-term, Uber laid out an addressable market of 4.7tn miles (passenger vehicle trips <30 miles), which represents a $3.0tn TAM (across 63 countries). Within US & Canada ridesharing specifically, we estimate Uber & Lyft have exposure to a potential $205bn TAM in 2021 (growing to $312bn in 2026), based on the total US & Canada working age population. Within that, total bookings of ~$35bn represent 17% penetration of addressable industry bookings in 2021. We model Uber's global mobility business growing gross bookings from $39bn in 2021 to $110bn in 2026 (~23% '21-'26 CAGR & vs. $50bn in 2019), with the US & Canada growing from $23bn to $73bn over the same time period (vs. $27bn in 2019). This compares to our estimates for Lyft, which assume gross bookings grow from $11bn in 2021 to $30bn in 2026 (~22% '21-'26 CAGR). We'd note this implies Uber's US & Canada ridesharing market share grows marginally from 67% in 2021 to 70% in 2026. As we gradually recover from the impact of COVID, our base case assumption is for industry gross bookings to reach 2019 levels by 2H21/1H22.

Exhibit 79: US & Canada Estimated Rideshare Bookings & TAM
$mm, '16-'26



Source: Company data, Federal Reserve Bank of St. Louis, Census Bureau, World Bank, Second Measure, McKinsey, Statistics Canada, Goldman Sachs Global Investment Research

Exhibit 80: UBER & LYFT Gross Bookings (US & CAN)
$mm, '16-'26

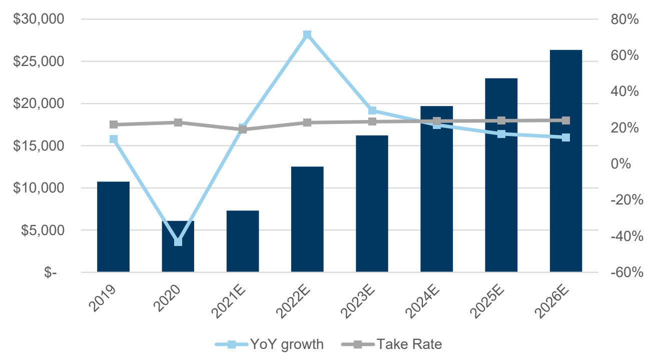


Source: Company data, Goldman Sachs Global Investment Research

Revenue Growth

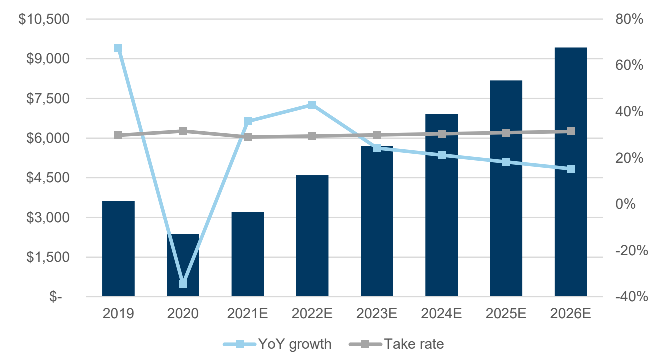
In terms of revenue growth, we assume Uber's mobility business grows revenue from $7.3bn in 2021 to $26.4bn in 2026 (29% '21-'26 CAGR) with take rates expanding from ~19% in 2021 to ~24% in 2026, reflecting improved service fee structures, efficiency & use of certain incentives/promotions. This compares to our estimates for Lyft, which assume revenue grows from $3.2bn in 2021 to $9.4bn in 2026 (~24% '21-'26 CAGR) reflecting active riders growing at a 16% CAGR and revenue per active rider at a 7% CAGR over the same time period.

Exhibit 81: UBER Mobility Revenue
$mm, '19-'26



Source: Company data, Goldman Sachs Global Investment Research

Exhibit 82: LYFT Revenue
$mm, '19-'26

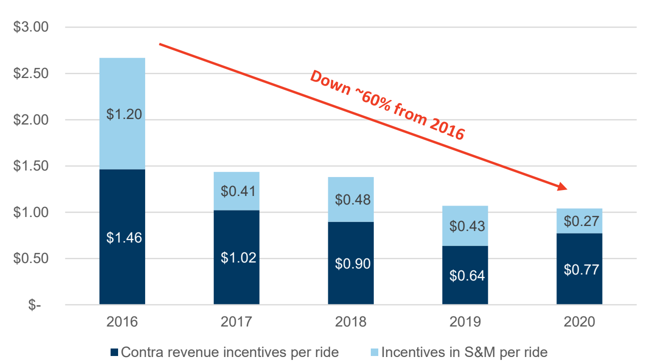


Source: Company data, Goldman Sachs Global Investment Research

Margin Trajectory

The US ridesharing industry has seen a rationalization of competitive intensity over the past couple of years (pre-COVID), with use of incentives & promotions becoming less prevalent than witnessed during the run-up to Uber & Lyft becoming public companies. Further, similar to many companies that were negatively impacted by COVID, the ridesharing industry cut fixed costs and was forced to operate with a leaner cost structure (something we think will persist as the recovery continues).

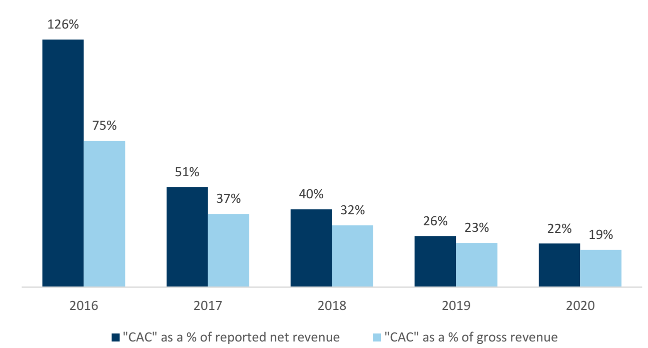
Exhibit 83: Lyft Customer & Driver Acquisition Costs per Ride
'16-'20



2019 & 2020 are based on GIR estimates for Lyft ride volume combined with company disclosed incentive data

Source: Company data, Goldman Sachs Global Investment Research

Exhibit 84: Lyft Customer & Driver Acqusition Costs as % of Revenue
'16-'20

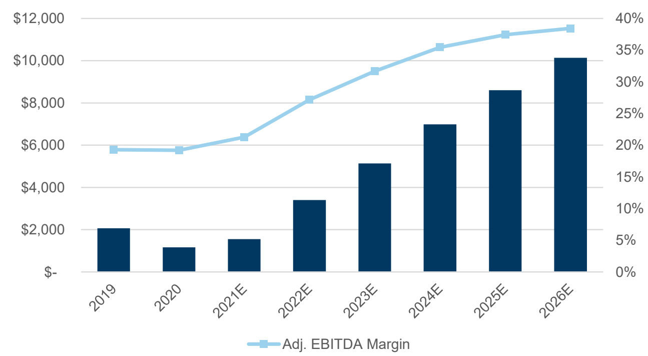


CAC is defined as reductions to revenue (related to driver, passenger & light vehicle incentives) and driver/passenger incentives included in S&M

Source: Company data, Goldman Sachs Global Investment Research

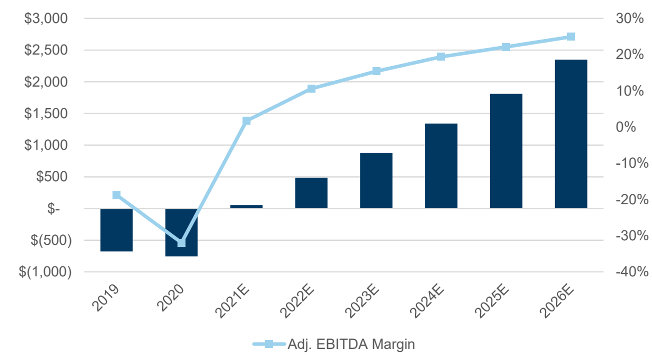
As a result of this (and despite COVID negatively impacting demand), we'd note Lyft recently reported its first profitable quarter as a public company on an Adj. EBITDA basis (something they expect to maintain) with rideshare volumes well below 4Q19 levels. While there are near-term investments that will be made to re-balance the supply/demand relationship on the networks & certain disclosures/accounting differences across industry players adding a layer of nuance to making apples-to-apples comparisons, we believe the ridesharing industry more broadly can achieve Adj. EBITDA margins in the 25-30%+ range at scale, similar to levels other internet marketplace businesses have achieved as they mature.

Exhibit 85: Uber Mobility Segment Adj. EBITDA & Margins
$mm, '19-'26



Source: Company data, Goldman Sachs Global Investment Research

Exhibit 86: Lyft Adj. EBITDA & Margins
$mm, '19-'26



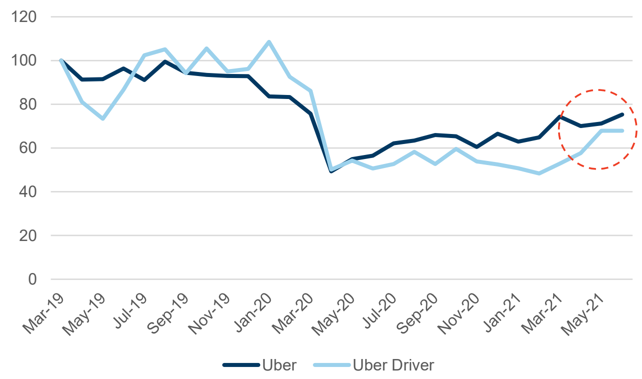
Source: Company data, Goldman Sachs Global Investment Research

Key Debates & Drivers for the Subsector

How is driver supply acting as a headwind to a return to normalized growth?

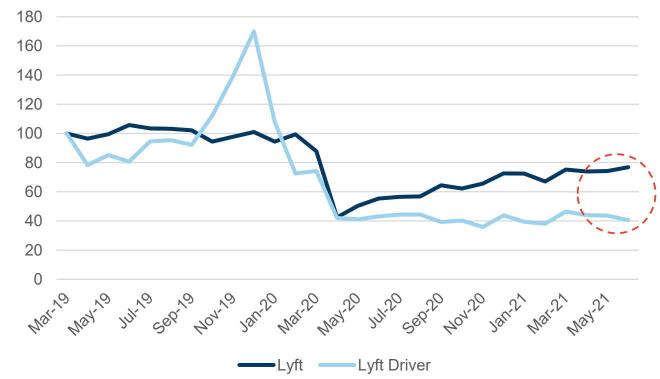
One phenomenon witnessed across several industries has been a combination of safety concerns due to COVID and a shortage of workers. While this is not unique to Uber & Lyft, they both have called out driver shortages on recent earnings calls (particularly in the US) despite record earnings for drivers in some cases. Specifically, Lyft management has highlighted that driver incentives had increased in Q2 and were likely to sustain at elevated levels in Q3 as the company tries to stimulate driver supply against a tight labor market & government stimulus/unemployment benefits (which will be a topic to monitor as benefits expire). This has led to longer wait times and elevated rider pricing given the supply/demand mismatch. According to Rakuten Intelligence, US rideshare prices are currently ~50% more expensive than January 2020 (based on e-receipts from more than a million consumers). As a result, both Uber & Lyft have been increasing investments to grow driver supply and return balance to the marketplace. These higher rider prices have been able to help partially offset elevated incentive levels on the driver side. Further, early indications have been that drivers are beginning to return to the network (Lyft disclosed that drivers increased 50% QoQ in Q2).

Exhibit 87: Uber vs. Uber Driver App Unique Visitors
indexed to March 2019



Source: comScore

Exhibit 88: Lyft vs. Lyft Driver App Unique Visitors
indexed to March 2019



Source: comScore

As the Pandemic Unemployment Assistance (PUA) & Pandemic Emergency Unemployment Assistance (PEUC) benefits expire, we would expect the driver shortage to gradually improve as workers return to the workforce, leading to lower usage of driver incentives and a normalization of rider pricing which should help stimulate incremental demand. On their 2Q21 earnings calls, both Uber & Lyft highlighted that they saw organic tailwinds to driver supply in states where unemployment benefits had rolled-off in the US. Further, as the GS economics team recently published, data from Gridwise Analytics indicates driver earnings—defined as the average of earnings per minute and earnings per mile—have declined by 5-10% over the last few months in states where some or all federal benefits expired on June 26. If the loss of unemployment benefits leads workers to look for a new job or work more hours, the effect of that increase in labor supply should be visible relatively early in wages and prices for ride-hailing services. We expect the questions of current driver supply and duration of incentives that might need to be deployed in order to rebalance the marketplace (and allow for consumer pricing to normalize) to remain a key debate among investors in the coming months.

How does the current regulatory environment impact long-term growth & profitability?

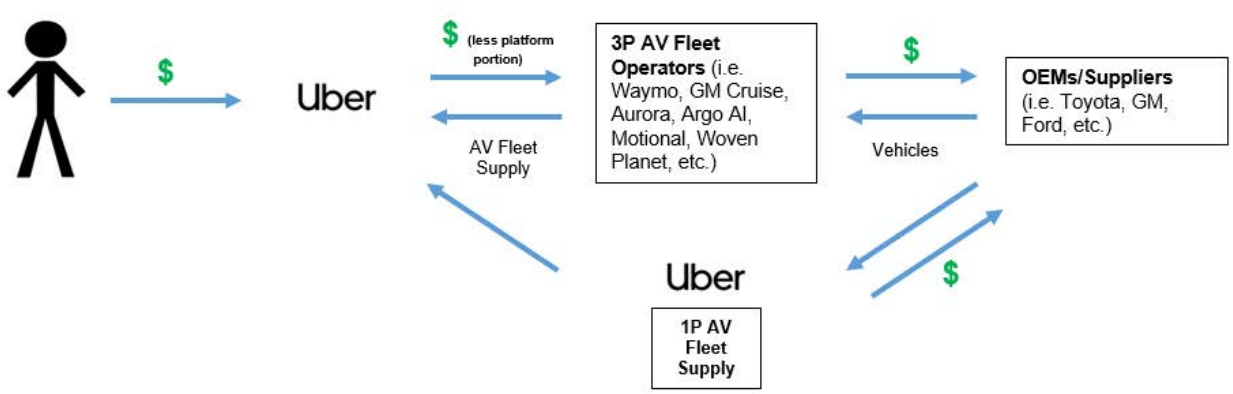
In comparison to the national regulatory environment for GOOGL/FB/AMZN, regulation in the rideshare industry to date has been more local in nature (state & local governments). The focus of regulators & politicians has primarily been around topics such as driver classification, minimum driver earnings, taxes, data sharing, and environmental (i.e. congestion, emission requirements, etc.). For example, in late 2019, California passed a law (AB5) that would have classified drivers as employees and materially change the cost structure of ridesharing networks. Ultimately, we saw the passage of a ballot initiative in 2020 (Prop22) that gives drivers incremental benefits while maintaining their independent contractor status & flexibility. Further, in February 2021, the Supreme Court of the UK upheld a tribunal ruling that certain Uber drivers using the app in 2016 were workers for UK employment law purposes. In March 2021, the company announced that they would treat private-hire drivers using its Mobility platform in the UK as workers going forward (adding additional costs to the P&L related to driver earnings & benefits).

Investor concerns related to the regulatory environment and what it looks like going forward (particularly around incremental costs related to driver pay & benefits) have been an overhang on the sector. While it is likely that continued regulatory concerns across jurisdictions will add incremental costs to the P&L, we believe companies have multiple levers to help offset these costs (i.e. lower incentives & promotions, higher prices, improved route efficiency, etc.). Further, by offering incremental benefits to drivers, it could act as a barrier to entry for new entrants with less scale and help existing players with driver retention.

How can an eventual shift to autonomous vehicles change the industry dynamic?

With both Uber and Lyft selling their autonomous vehicle (AV) units, we believe the long-term picture of how the AV industry and rideshare networks interact is beginning to emerge. Specifically, we believe Uber & Lyft will operate either as: 1) an entirely asset-light third-party (3P) marketplace for AV fleet operators to plug their supply into as a way to generate demand or 2) a hybrid 1P/3P platform in which both Uber/Lyft branded AVs and 3P fleets are made available on the respective platforms. Even in the second scenario, we believe the skew will most likely lean towards 3P supply based on Uber & Lyft recently selling their AV units.

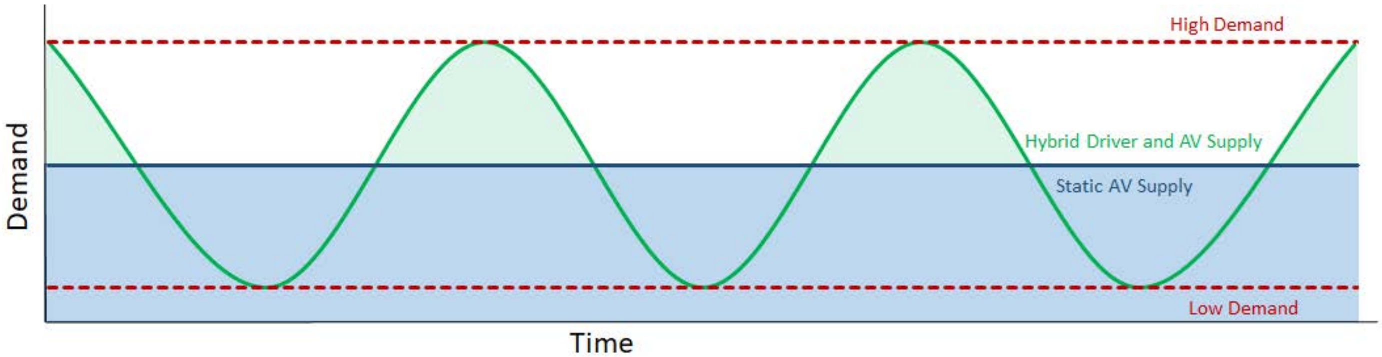
Exhibit 89: Rideshare 1P/3P Hybrid AV Ridesharing Platform



Source: Company data, Goldman Sachs Global Investment Research

An area we will be paying close attention to as AVs begin to get deployed on ridesharing networks is how these deals are structured & what the unit economics look like. As AV fleet operators scale, and we transition from ridesharing 1.0 to ridesharing 2.0, we could see a gradual shift in the supply-side industry structure from highly fragmented (i.e. millions of individual drivers) to more consolidated (i.e. a handful of AV fleet operators). This could have implications for take rates & unit economics for the marketplace, similar to how chain & independent/boutique hotels have different negotiated deal structures with online travel agencies like Booking Holdings (BKNG) & Expedia (EXPE). The relative negotiating leverage will likely depend on a number of factors (i.e. the route coverage AVs will be capable of handling, how consolidated AV fleet operators becomes, AV unit economics, etc.). That said, even if AVs were to gradually be deployed in certain geographies over the next 3-5 years, it is likely they will operate as supplemental supply for specific routes as opposed to being the only option. A hybrid offering combining AVs and human drivers unlocks the highest utilization, ensures availability and a better user experience for riders, in our view. Further, we'd note the most profitable routes are often the most complex to solve from an AV technology perspective (i.e. airport pick-up/drop-offs, late night pick-up/drop-offs to nightlife in crowded city streets, etc.).

Exhibit 90: Hybrid AV Networks Allow for Balance of Utilization & Customer Experience



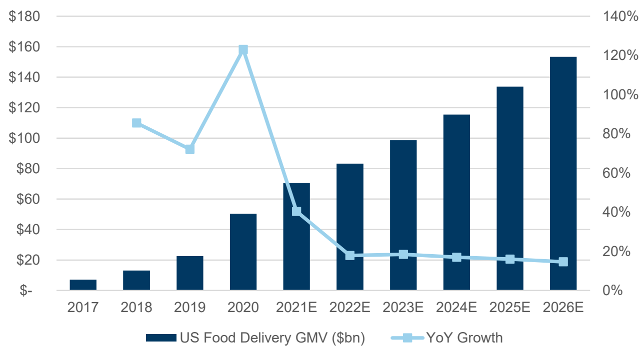
Source: Goldman Sachs Global Investment Research, Lyft

Food Delivery / Local Commerce

TAM & Market Sizing

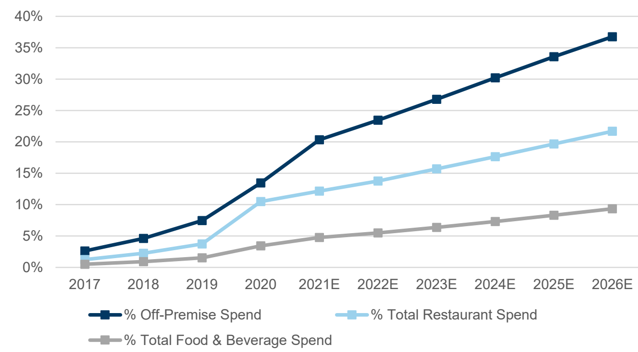
Uber has framed the global serviceable addressable market for food delivery to be $795bn. This represents the portion of the ~$2.8tn global spend of consumer food services associated with meals for home delivery, takeaway and drive-through. Within the US specifically, we estimate Uber & DoorDash have exposure to a potential $153bn TAM by 2026 (from $50bn in 2020), representing a '20-'26 CAGR of ~20% with an exit rate in the mid-teens. We'd note this represents food delivery increasing penetration of total food & beverage spend from 3% in 2020 to 9% in 2026. We assume DoorDash grows Marketplace Gross Order Value (GOV) from $25bn in 2020 to $104bn in 2026 (~27% '20-'26 CAGR), with the US growing from $24bn to $86bn over the same time period. This compares to our estimates for Uber's Delivery business, which assumes gross bookings grow from $30bn in 2020 to $129bn in 2026 (~27% '20-'26 CAGR). We further assume that the US business grows from $12bn to $45bn over the same time period. This implies DoorDash grows US market share from 47% in 2020 to 56% in 2026, with Uber Eats growing from ~25% to ~30% over the same time period (inclusive of Postmates acquisition in late-2020).

Exhibit 91: US Food Delivery GMV
$bn, '17-'26



Source: Company data, Euromonitor, Edison Trends, Second Measure, OECD, Goldman Sachs Global Investment Research

Exhibit 92: US Food Delivery GMV Penetration
'17-'26

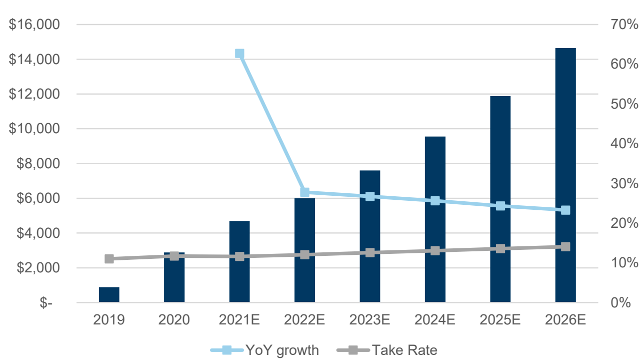


Source: Company data, Euromonitor, Edison Trends, Second Measure, OECD, Goldman Sachs Global Investment Research

Revenue Growth

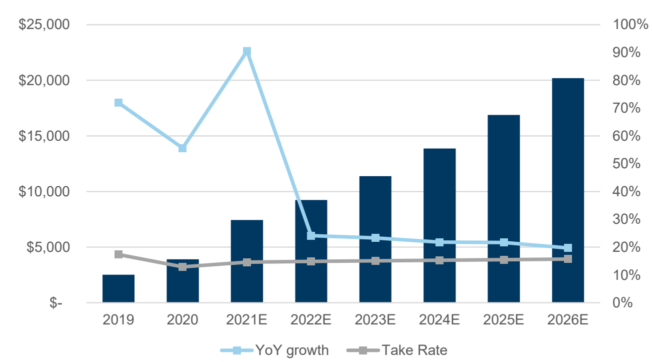
In terms of revenue growth for the industry, we assume DoorDash grows revenue from $2.9bn in 2020 to $14.7bn in 2026 (31% '20-'26 CAGR) with take rates expanding from 11.7% to 14.1% over that same time, primarily reflecting more efficient use of incentives/promotions, better routing efficiency over time & DoorDash Drive growing faster than the Marketplace business (accounting tailwind to take rate). This compares to our estimates for Uber's Delivery segment, which assumes revenue grows from $3.9bn in 2020 to $20.2bn in 2026 (32% '20-'26 CAGR). This is a function of take rates expanding from 12.9% to 15.7% over that same time, primarily reflecting a growing advertising revenue base, more efficient use of certain promotions and greater routing efficiency over time (i.e. batching & chaining).

Exhibit 93: DoorDash Revenue
$mm, '19-'26



Source: Company data, Goldman Sachs Global Investment Research

Exhibit 94: Uber Delivery Revenue
$mm, '19-'26

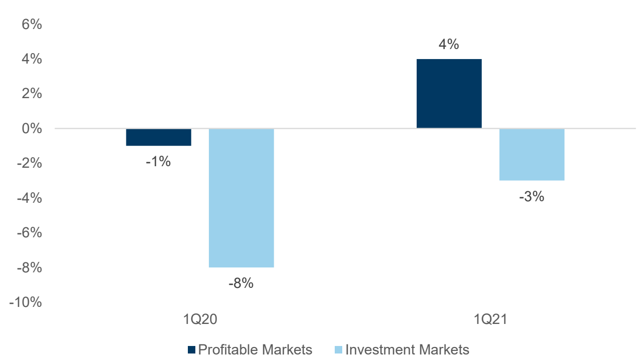


Source: Company data, Goldman Sachs Global Investment Research

Margin Trajectory

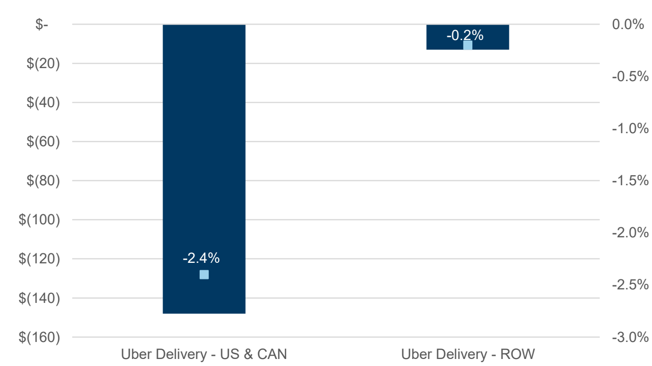
While we acknowledge competitive intensity in the food delivery end market has not rationalized to the same degree as ridesharing to date, we would point to some examples that show core food delivery can and has achieved profitability (i.e. DoorDash in the US, certain non-investment markets for Uber, Meituan, etc.). While there are investments being made over the medium-term against long-tailed growth opportunities (i.e. grocery, convenience, alcohol & other local delivery) & certain disclosures/accounting differences across industry participants adding a layer of nuance to making apples-to-apples comparisons, we believe the food delivery industry more broadly can achieve Adj. EBITDA margins in the 25-30%+ range at scale, similar to levels other internet marketplace businesses have achieved as they mature. Our view is centered around the long-term growth profile of the industry, a rationalization of incentives & promotions over time, leveraging fixed costs in the business and longer term investments eventually abating.

Exhibit 95: Uber Delivery Adj. EBITDA Margin (as % of GBs)



Source: Company data

Exhibit 96: 2Q21 Uber Delivery Adj. EBITDA & Margin (as % of GBs) by Region
$mm



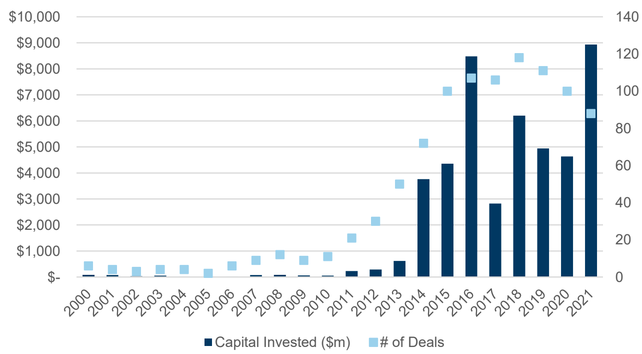
Source: Company data

Key Debates & Drivers for the Subsector

Is food delivery in the process of morphing into local last mile logistics?

With COVID acting as a catalyst for digital adoption of food delivery & grocery delivery, industry players have recognized the long-tailed growth opportunity in last mile logistics of local goods (i.e. grocery, convenience, alcohol, etc.). For example, online grocery penetration is expected to increase from mid-single digits to mid-teens over the next few years according to eMarketer. In addition, the USDA estimates total spend on alcohol was ~$235bn in 2019, of which ~$115bn was consumed at home. What began as Amazon's industry altering shift to Prime 2-day shipping is quickly morphing into an industry battle for both consumers and merchants around same day and increasingly "next few hours" delivery. Given local commerce is still under-penetrated relative to other offline to online shifts, we see this theme as a double-edged sword – it can be a contributor to incremental growth not already in financial projections but is also likely to come with high competitive intensity and high levels of investment in the name of supply/demand.

Exhibit 97: Last Mile Delivery Private Funding & # of Deals (US, Canada & Europe)



Includes angel, seed, early stage VC & later stage VC funding

Source: PitchBook

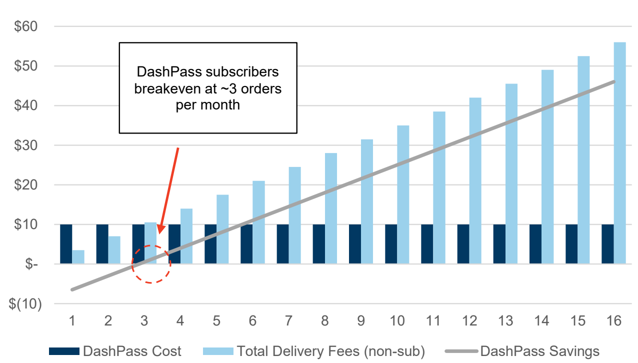
Exhibit 98: Growth of Online Spend on Restaurant, Grocery & Convenience Store Pickup & Delivery

Source: Edison Trends

How important are subscription offerings in driving a flywheel?

Given local logistics models can generally be characterized as high volume/low unit economics, one strategy that has emerged is rolling out subscription offerings. For example, DoorDash offers DashPass, Uber offers Uber Pass (as well as Eats Pass & Postmates Unlimited) and Grubhub offers Grubhub+. The trade off is subscription offerings will drive greater customer loyalty, higher frequency of use and ultimately greater LTVs in exchange for consumer discounts. The resulting impact on the P&L of subscription offerings is lower per order economics but a much greater share of wallet & higher aggregate dollar spend due to the step-up in frequency that occurs by subscribers relative to non-subscribers. We believe companies that take the platform/super app approach are at an advantage relative to single end market focused companies. Amazon Prime subscription offerings have shown that continuously providing more value to subscribers (in the form of subscription benefits vs. cost of subscription) results in a more loyal customer base with long term optionally to increase subscription prices.

Exhibit 99: DashPass Subscriber Order Frequency Analysis



Assumes $3.50 delivery fee per order and $9.99 per month for DashPass

Source: Company data, Goldman Sachs Global Investment Research

Exhibit 100: Illustrative DashPass Subscriber vs. Non-Subscriber Per Order Economics

	DashPass	Non-DashPass	% Difference
Delivery Fee	$ -	$ 3.50	
Service Fee	$ 1.50	$ 2.00	
Merchant Commission	$ 4.00	$ 4.00	
Dasher Payout	$ (4.60)	$ (4.60)	
Revenue per Order	**$ 0.90**	**$ 4.90**	***-82%***
Orders per Month	7.5x	3.0x	
Monthly Revenue from Orders	**$ 6.75**	**$ 14.67**	
DashPass Subscription Fee	$ 9.99	$ -	
Total Monthly Revenue	**$ 16.74**	**$ 14.67**	***14%***

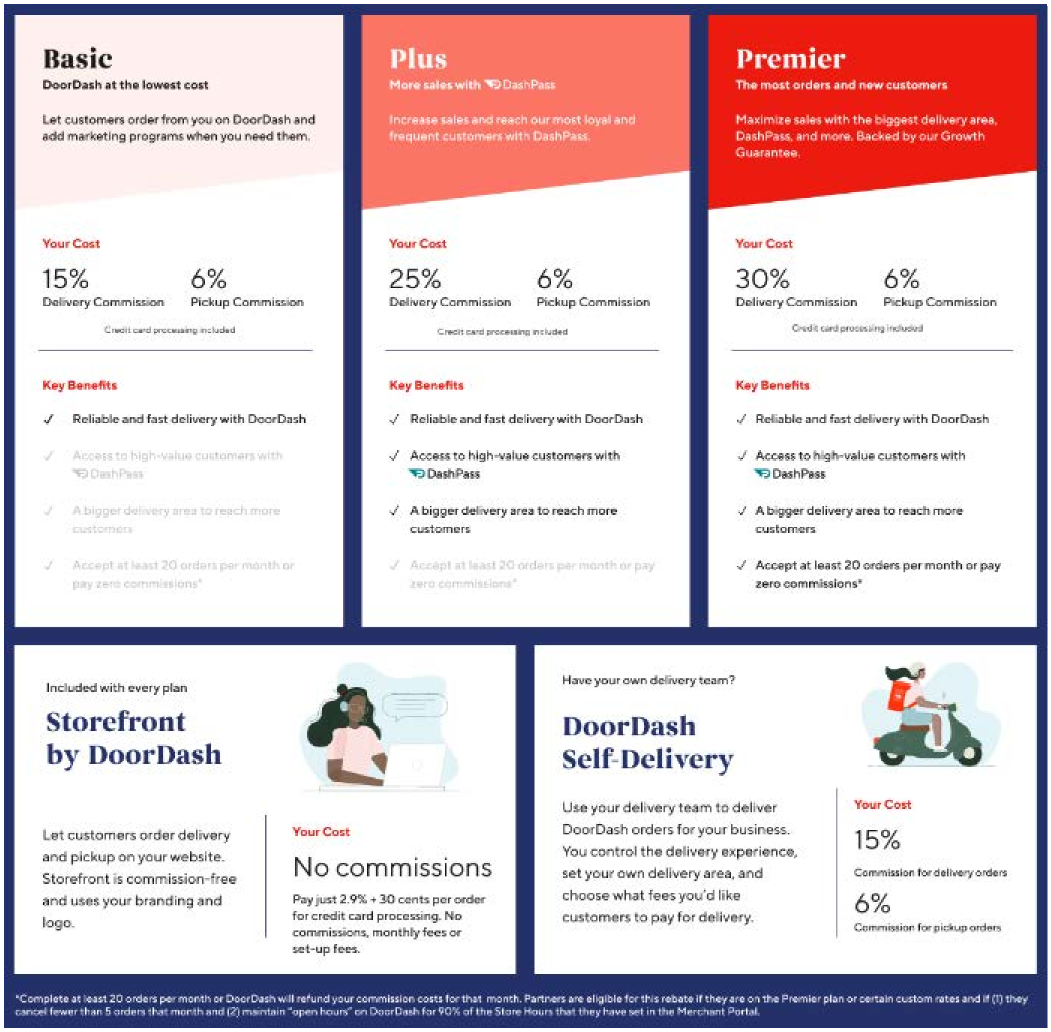
Assumes DashPass saves subscribers $4 per order (gross) and $20 per month (net of $9.99 subscription fee)

Source: Company data, Goldman Sachs Global Investment Research

How does the current regulatory environment impact long-term growth & profitability?

Similar to the ridesharing industry, food delivery has come under regulatory scrutiny of late. The main issues regulators & politicians appear to be concerned with are driver classification (incl. wages/benefits) & commission caps. As it relates to commission caps, many of the Tier 1 cities (i.e. NYC, San Francisco, Chicago, etc.) enacted emergency orders capping commissions third-party delivery platforms could charge restaurants to ~15-20% (with each city having various nuances in the details) during COVID. Most were/are set to expire as indoor capacity limits are lifted. However, there is a push by many local policymakers to extend these commission caps &/or make them permanent. For example, San Francisco became the first city to vote to make the commission cap policy permanent for delivery fees, with work still to be done on certain amendments under consideration according to press reports. While we expect there to be continued concerns over commission caps at a local level going forward, we note recent moves by companies to address these concerns. For e.g., DoorDash rolled out a tiered fee structure where merchants can chose from a number of service options which could be a potential transparent solution. Platforms that increasingly focus on an array of supply-side solutions (white label delivery, pick-up, self-delivery, advertising to boost demand generation, ghost kitchen partnerships, additional value added services, etc.) appear well positioned in the current regulatory landscape by actively trying to meet merchants where they are.

Exhibit 101: DoorDash Partnership Plans



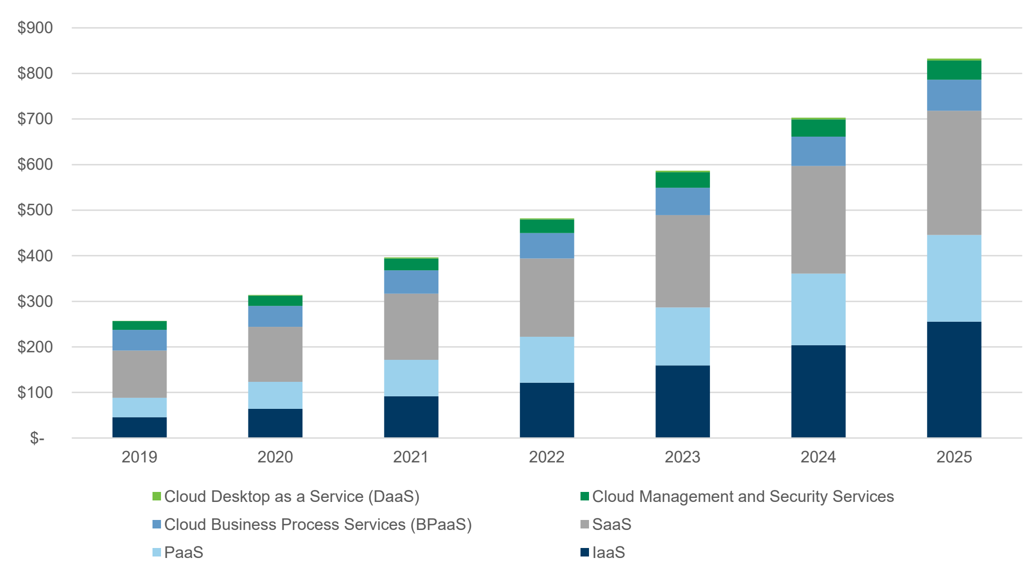
Source: Company reports

Cloud Computing

TAM & Market Sizing

Cloud computing continues to be a secular growth theme within large-cap tech. The public cloud market can be characterized as: 1) having a high degree of concentration among a handful of scaled tech players, though not having a "winner take all" dynamic; 2) having elements of being a beneficiary from COVID given enterprise push to digitize (though there have been elements of volatility based on customer end market); & 3) companies continuing to invest (both organically and through M&A) against the large & fast growing opportunity (i.e. data center capacity, geographic expansion, salesforce, new product/service offerings, etc.). According to Gartner, the size of the global public cloud computing market is expected to grow from $314bn in 2020 to $833bn in 2025 (22% CAGR). Within that definition of public cloud, Infrastructure as a Service (IaaS) is expected to grow from $64bn in 2020 to $255bn in 2025 (32% CAGR). Further, Platform as a Service (PaaS) is expected to grow from $59bn in 2020 to $190bn in 2025 (26% CAGR). According to our 2021 IT Spending Survey, averages suggest that 21% of workloads are now on the public cloud (vs 22% in December 2020) with 40% of workloads expected to be on the public cloud in 3 years. This is down slightly from 41% in our December 2020 survey and 42% in June 2020 suggesting that COVID has had a minimal impact on longer term cloud migration plans.

Exhibit 102: Gartner Global Public Cloud Size
$bn, '19-'25

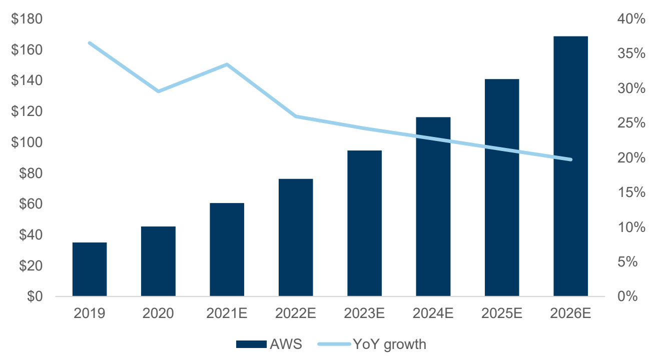


Source: Gartner

Revenue Growth

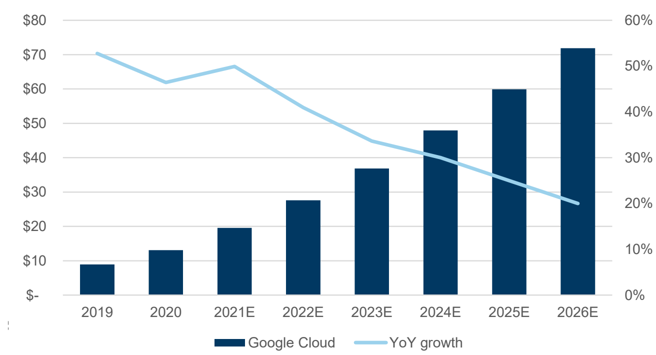
In terms of revenue growth, we assume Amazon's AWS segment grows revenue from $45bn in 2020 to $169bn in 2026 (24% '20-'26 CAGR). This implies AWS market share within core cloud (IaaS/PaaS) gradually declines from the high-30% range in 2020 to low-30% in the out years of our model. In our view, this reflects: 1) the law of large numbers as Amazon was first to scale in public cloud and has been the market share leader in cloud IaaS for the last decade; 2) Azure growth and their positioning with large enterprise relationships; & 3) incremental investments from distant players globally looking to make inroads to a large & fast growing TAM (i.e. Alphabet, Alibaba, Tencent, etc.). For Google Cloud (which includes GCP & Workspace), we forecast total segment revenue growing from $13bn in 2020 to $72bn in 2026 (33% '20-'26 CAGR). If we assume ~60% of Google Cloud is attributable to GCP, this would imply Alphabet has ~7% market share of IaaS/PaaS cloud spend in 2021, which we would expect to increase gradually over time into the low-double digit range.

Exhibit 103: AWS Revenue
$bn, '19-'26



Source: Company data, Goldman Sachs Global Investment Research

Exhibit 104: Google Cloud Revenue
$bn, '19-'26

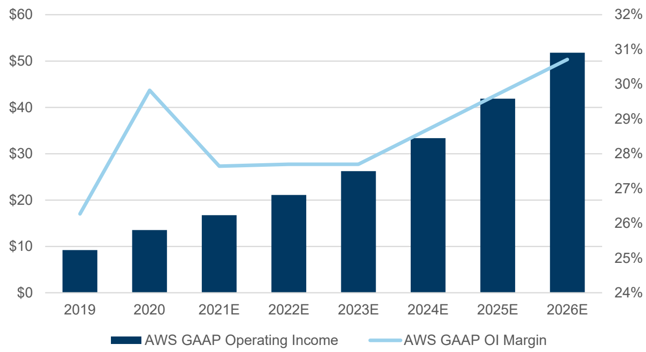


Source: Company data, Goldman Sachs Global Investment Research

Margin Trajectory

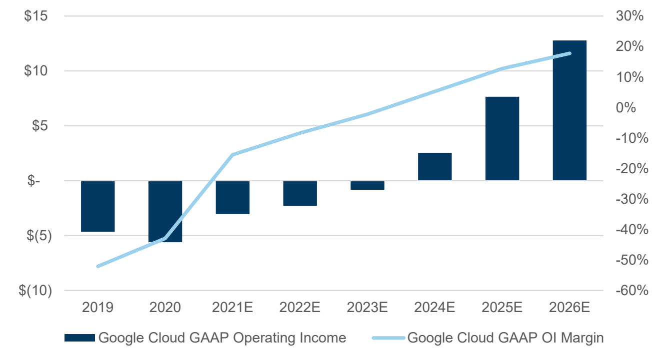
Given AWS is the incumbent leader, we believe looking at their operating margin structure (mid-20% to low-30% range) is a reasonable assumption for where other players can reach once fully scaled (keeping in mind there could be differing cost allocation dynamics across the large tech platforms). That said, we acknowledge each of the big 3 (AWS, Azure & Google Cloud) are all making investments against the market opportunity. Examples of areas of investment include headcount (continuing to build out an enterprise salesforce), infrastructure (data center/regional expansion), new products & offerings, & price (with GCP historically being the most aggressive on price to win deals). We currently model AWS growing GAAP EBIT margins from ~28% in 2021 to 31% in 2026. Further, we expect Google Cloud to grow margins from -15% in 2021 to 18% in 2026.

Exhibit 105: AWS GAAP OI & Margins
$bn, '19-'26



Source: Company data, Goldman Sachs Global Investment Research

Exhibit 106: Google Cloud GAAP OI & Margins
$bn, '19-'26



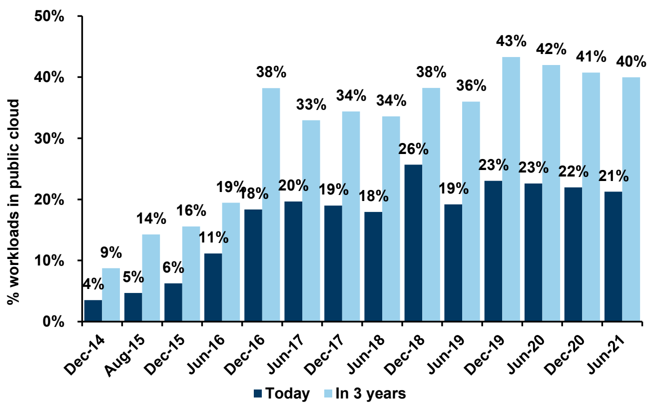
Source: Company data, Goldman Sachs Global Investment Research

Key Debates & Drivers for the Subsector

How are enterprises thinking about public cloud spending post-COVID?

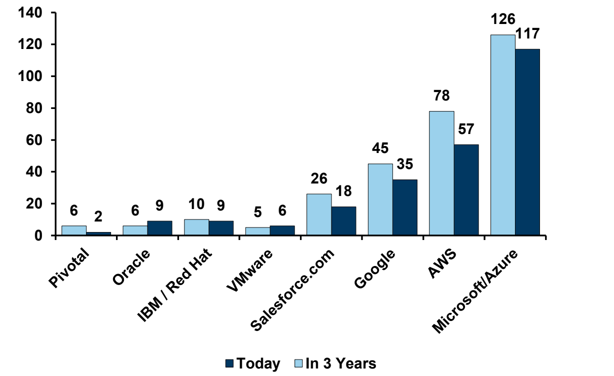
Broadly speaking, per the recent GS IT Spending Survey, CIO spending intentions for 2021 improved relative to our December 2020 survey with both indices now in expansion territory. As it relates to public cloud, infrastructure adoption was about the same as our December survey. Specifically, our CIO survey averages suggest that 21% of workloads are now on the public cloud (vs 22% in December 2020) with 40% of workloads expected to be on the public cloud in 3 years. This is down slightly from 41% in our December 2020 survey and 42% in June 2020 suggesting that COVID has had a minimal impact on longer term cloud migration plans. We would point out that when including companies not captured in our CIO survey (i.e., Apple, Amazon, etc. who almost exclusively leverage hyperscale architectures), a recent proprietary analysis would point to hyperscale infrastructure running ~39% of workloads today. Further, while AWS still leads in total spending, MSFT Azure remains ahead of AWS in IaaS + PaaS in terms of both respondents using today and expected to in the future according to the survey. Finally, Google continues to retain its position as the #3 public cloud vendor while Salesforce retained the #2 spot in terms of PaaS adoption.

Exhibit 107: Percentage of workloads in public cloud today (navy) vs. percentage of workloads in public cloud in three years (light blue)
Percentage of survey respondents



Source: Goldman Sachs Global Investment Research

Exhibit 108: Which public cloud vendor(s) are you using today and which will you use three years from now?
IaaS + PaaS (June 2021)

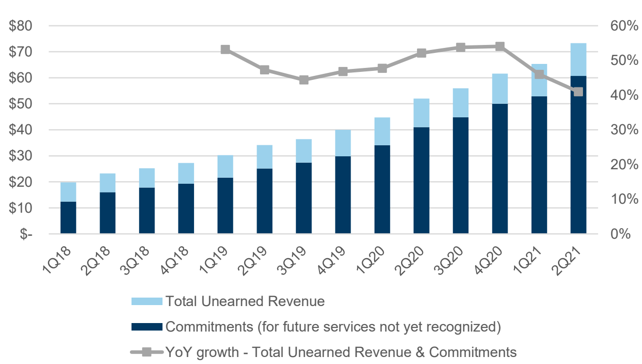


Source: Goldman Sachs Global Investment Research

What does backlog data tell us about forward growth?

Over the past few quarters, we've witnessed certain periods of accelerating growth in backlog commitments for public cloud players on both a year-over-year and sequential basis. Investors have debated the cause of this, what impact it could have on reported revenue and when it would show up in numbers. Based on our industry conversations, we believe a contributing factor to the strong growth in backlog data is that enterprises have been shifting to longer-term contracts with larger dollar commitments in exchange for certain discounts. This is in addition to the broader tailwinds of public cloud adoption. With both AWS & Google Cloud reporting cloud segment revenue growth accelerating sequentially in Q2, we could be starting to see that backlog strength flowing through to reported revenue. As such, we model continued strength in AWS & Google Cloud revenues over the next few quarters.

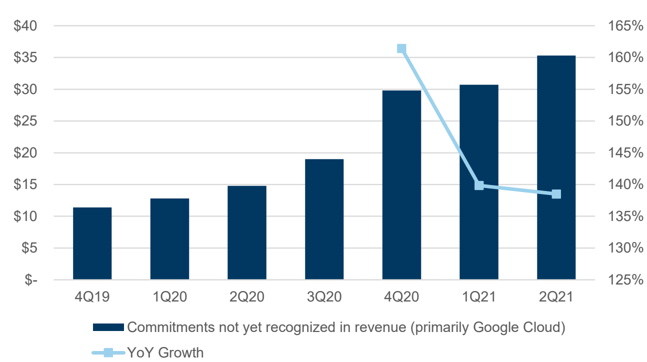
Exhibit 109: AMZN Unearned Revenue & Commitments
$bn



Unearned revenue is primarily related to AWS & Prime memberships and recorded on balance sheet. Commitments for future services not yet recognized are AWS contracts with original terms >1 year that have not been recognized in financial statements.

Source: Company data, Goldman Sachs Global Investment Research

Exhibit 110: GOOGL Commitments not yet Recognized in Revenue
$bn



Commitments not yet recognized in revenue primarily relate to Google Cloud for future services that have not yet been recognized as revenues. These remaining performance obligations include related deferred revenue currently recorded as well as amounts that will be invoiced in future periods, and excludes contracts with an original expected term of of 1 year or less, cancellable contracts, and contracts for which Alphabet recognizes revenue at the amount to which they have the right to invoice for services performed

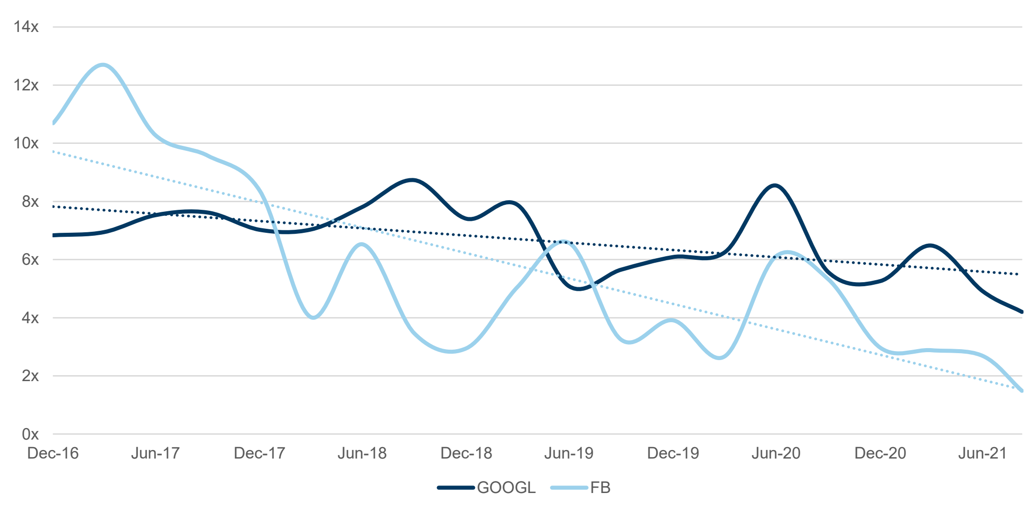
Source: Company data, Goldman Sachs Global Investment Research

Industry Regulation

Since 2015, rising regulatory scrutiny has been an overhang on the US Internet sector. Cumulative fines issued by regulatory bodies globally have accelerated over the last 6 years (including ~$9.5bn issued by the EC against Alphabet alone for three alleged violations between 2017-19) while, at the same time, a combination of new legislation and several inquiries/lawsuits have impacted various subsectors within our coverage universe. In the sections below, we outline where the current regulatory landscape stands today (both in the US & internationally) and how it appears to be evolving across a few separate categories: a) **Antitrust/Market Share**; b) **Data Privacy & Portability**; c) **Content Moderation;** & **d) 1P vs. 3P Marketplace Inter-connectivity.**

For the companies within our coverage that are most exposed to rising regulatory scrutiny (Alphabet, Facebook & Amazon, given their large scale), we believe the current outstanding regulatory matters outlined below across these four categories (and potential future matters of similar nature) will most likely manifest as potential headwinds to either operating results (e.g., revenue headwinds, higher operating expenses to comply with new regulations on a regional basis, fines issued, etc.) and/or valuation multiples. That being said, we believe investors have largely priced in these potential operating headwinds. To illustrate this, Exhibit 111 shows that the average P/E multiple spread between Alphabet/Facebook and the S&P 500 has seen significant compression over the past 5 years despite these companies having produced above-market-average earnings growth.

Exhibit 111: Average Historical 12-Mo Fwd. P/E Spread (vs. S&P 500)
Alphabet & Facebook have seen relative multiple compression in recent years which, in our view, is a result of regulatory headwinds being priced in by investors



Shows the spread between GOOGL & FB's historical P/E (based on consensus forward 12-month EPS ests) and S&P 500

Source: FactSet, Goldman Sachs Global Investment Research

Antitrust/Market Share

Last year saw a significant increase in global antitrust scrutiny against US internet platforms, led by several lawsuits filed by US regulatory agencies in late 2020 (including antitrust lawsuits filed against Alphabet by the US DOJ and two separate groups of state attorneys general as well as an antitrust lawsuit filed against Facebook by the US FTC and state attorneys general). While these lawsuits varied in terms of their scope, their general focus was on market share dynamics of (and anti-competitive behavior within) specific operating verticals (search & programmatic advertising for Alphabet; social media for Facebook).

We highlight a few relevant characteristics of the current US antitrust legislative framework as it pertains to these outstanding lawsuits.

- The current framework prohibits obtaining monopolistic power through the suppression of competition or other anti-competitive conduct;
- The current framework requires the existence of some harm to consumers (although not limited to monetary price increases, but could include harm to innovation, etc.) to consider for anti-trust review; and
- Any remedy enforced (as a result of a court ruling) would need to both be directly tied to a specific antitrust violation and prove to actually resolve the anti-competitive behavior itself.

While we do not take a view on the outcome, should any of these lawsuits result in a court ruling in favor of the plaintiff, we believe that "behavioral" remedies (those that involve restrictions on certain business practices/behaviors – e.g., limiting cross-company synergies/data interoperability, etc.) are more likely outcomes vs. "structural" remedies (those that involve structural business model changes – e.g., a full scale "break-up," forced divestiture of business units and/or prior acquisitions) given they are generally easier to enforce/implement and have a lower burden of proof for the plaintiff. As a caveat, we note that there are a wide variety of potential outcomes for these antitrust lawsuits and that timing of any potential court process remains uncertain (based on precedent, a typical timeline involves 2-3 years in between the filing of a lawsuit and the start of trial, a trial period of several months, and an optional appeals process of up to one year, with the possibility of the lawsuit being settled or dropped at any point).

Data Privacy & Portability

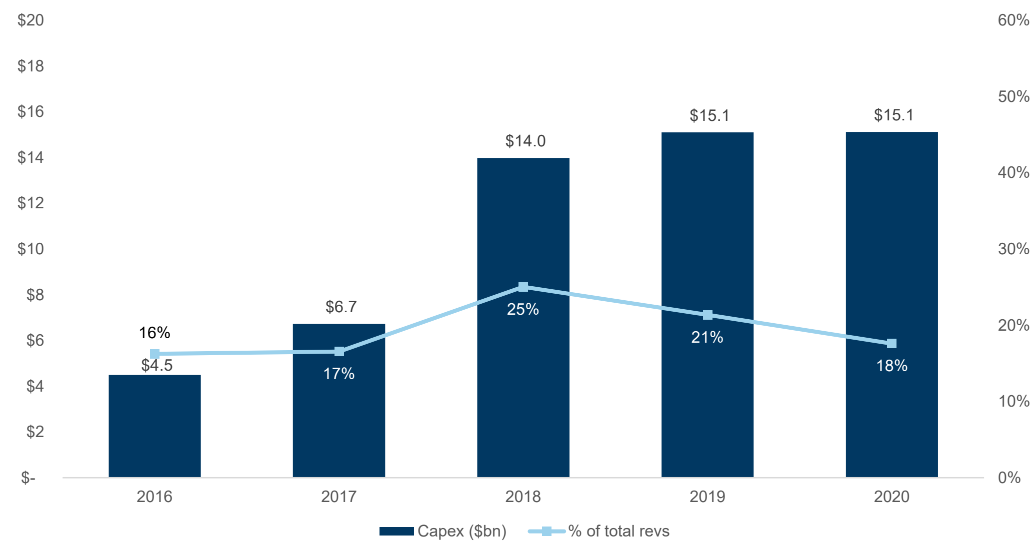
As we discussed in more detail in our Digital Advertising subsector section, data privacy & collection has been an area of significant focus recently, for both regulators & third-party platforms. There have been a number of data privacy regulations enacted over the past several years, including the EU's General Data Protection Regulation, which was introduced in 2016 and went into effect across Europe in May 2018, and the California Consumer Privacy Act, California's state-wide data privacy legislation introduced in early 2018. Most recently, in December 2020, the European Commission submitted two legislative proposals: the Digital Services Act and Digital Markets Act. Under these proposals, certain digital entities will be defined as "gatekeepers," which would enforce certain requirements, including: a) greater transparency into how recommendation algorithms work and greater user control over these algorithms; b) access to data held by these companies (including ad archives) for regulators & researchers; c) easier cross-platform and cross-border portability of user data to promote competition and lower switching costs between services; and d) greater accountability for controversial_content posted on a platforms' site. The DSA and DMA remain early in the proposal process, with many details (e.g., what constitutes a "gatekeeper"?) and potential timing of implementation yet to be determined. We will continue to monitor for any developments.

Leaving aside the changes being made by third-party platforms (e.g., Apple's ATT; Google's Privacy Sandbox, etc.), which we discuss in detail in the Digital Advertising subsector section above, the biggest risk of these new regulations, in our view, is the potential for higher operating costs (to comply with regional-specific data practices) and/or fines issued for alleged violations (several fines have already been issued in Europe for alleged GDPR violations, including the French CNIL's fine against Google in 2020 and, more recently, the EU CNDP's fine against Amazon in July 2021). That said, we still believe the large, scaled platforms remain best positioned to navigate these headwinds given their access to 1P data at scale (through global installed user bases) and resources to comply with increasingly-localized regulations.

Content Moderation

Since 2017, there has been an increasing focus by regulators on content moderation, including greater scrutiny around platforms' responsibility to prevent the spread of misinformation or nefarious content on their sites. In the US specifically, there have been ongoing political discussions about Section 230 of the Communications Decency Act, the legal liability shield that protects platforms from content published on their site, including the possibility of removing some or all of the types of content protected under the legislation. While we take no view on any potential changes to Section 230, we expect continued political and public pressure for platforms to better moderate content published/shared on their sites, and any requirement to do so would likely drive continued heightened costs (for content moderation, operations & support for users to flag content, etc.) in the coming years. To illustrate, Facebook spent a cumulative ~$55bn on total capital expenditures between 2016-2020, with a significant portion going toward localized data centers and network infrastructure to support their AI/ML and broader content moderation efforts.

Exhibit 112: Facebook Total Annual Capex Spend
($bn, '16-'20)



Source: Company data, Goldman Sachs Global Investment Research

1P vs. 3P Marketplace Inter-connectivity

In recent months, regulators have been increasingly reviewing online marketplaces that operate both first-party and third-party selling capabilities for potential antitrust issues. Regulator concerns are centered around both the alleged internal use of third-party seller data to inform a marketplaces' own first-party retail business and the alleged preferential treatment given to a marketplaces' own first-party products (on search results, product listings & other site landing pages) over third-party products. Specifically, in November 2020, the European Commission informed Amazon of its preliminary view that the company had breached EU antitrust rules after a ~15 month investigation (albeit the investigation remains ongoing), while press reports indicate the UK's Competition and Market Authority has begun similar investigations. Amazon has publicly disagreed with the EC's preliminary view, stating that it represents less than 1% of the global retail market, and that there are larger retailers in every country it operates in.

App Stores - Analyzing Potential Impact from Play Store Restrictions on Alphabet's Operating Results

Over the past several years, one area of increased scrutiny (by both regulators and third parties) has been around mobile app stores and their business practices with app developers. Specifically, there have been a number of lawsuits (Utah State AG et. al. v. Google; separate lawsuits from Epic Games v. Apple and Google; etc.) alleging certain business practices by app stores constitute monopolistic behavior, including commission fees on in-app purchases, limitations placed on communications between developers & consumers, and restrictions on developer's ability to list on other app stores. Apple recently announced a settlement of a class-action lawsuit filed by a group of app developers, including several changes to its app store policies and a commitment to maintain its reduced 15% commission for small developers (<$1m in annual revenue) for the next three years.

In addition to several outstanding lawsuits, new legislation has been introduced globally with respect to app store business practices, the most recent example being the South Korea legislature recently passing the Telecommunications Business Act, which, among other things, would mandate app stores (such as Apple's iOS App Store and Google's Play Store) to give users a choice of payment providers, enable free communication/transactions between developers and users and prohibit blocking developers from listing apps on other app stores.

While we do not take a view on the outcome of any outstanding litigation, we provide a scenario analysis below to illustrate the potential impact on Alphabet's operating results from increased restrictions on Google's Play Store (specifically, the potential reduction of developer commissions from 30% to 15% or lower). Recent press reports on a newly unredacted version of the Utah State AG et. al. lawsuit vs. Google noted that Google Play generated ~$11.2bn of revenues (implying ~66% of Google Other revenues), ~$8.5bn of gross profit and ~$7bn of operating income in 2019. For the sake of this analysis, we assume that Google Play revenues remain ~66% of Google Other revenues in 2023 (flat from 2019, according to these recent disclosures). Based on these assumptions and our base case Alphabet consolidated forecasts, we flex a range of outcomes including a 35-65% headwind to Google Play revenues (primarily from reduced commission fees) with fixed costs between 25-75% of Google Play operating income (based on qualitative company disclosures around their fixed & variable cost structure). The analysis indicates a potential ~6-17% headwind to our Alphabet consolidated operating income estimate in 2023. As a caveat, we note that there are a number of assumptions by which this scenario analysis is built that may not be accurate, including a) the estimated Google Play Store operating results in 2019 (Google has publicly disputed these figures); b) the blended average commission rate is likely lower than 30% currently due to Google already offering discounted commission rates for certain publishers; & c) the difficulty in allocating certain fixed/variable costs to specific business units.

Exhibit 113: Scenario Analysis - Alphabet Consolidated 2023 EBIT
$mm

		Headwind to Google Play Revenues						
		65%	60%	55%	50%	45%	40%	35%
Play % Fixed Costs	75%	$ 81,063	$ 82,328	$ 83,593	$ 84,858	$ 86,123	$ 87,388	$ 88,653
	67%	$ 81,549	$ 82,814	$ 84,079	$ 85,344	$ 86,609	$ 87,874	$ 89,139
	58%	$ 82,034	$ 83,299	$ 84,564	$ 85,829	$ 87,094	$ 88,360	$ 89,625
	50%	$ 82,520	$ 83,785	$ 85,050	$ 86,315	$ 87,580	$ 88,845	$ 90,110
	42%	$ 83,006	$ 84,271	$ 85,536	$ 86,801	$ 88,066	$ 89,331	$ 90,596
	33%	$ 83,491	$ 84,756	$ 86,021	$ 87,286	$ 88,552	$ 89,817	$ 91,082
	25%	$ 83,977	$ 85,242	$ 86,507	$ 87,772	$ 89,037	$ 90,302	$ 91,567

Source: Company data, Goldman Sachs Global Investment Research

Exhibit 114: Scenario Analysis - % Headwind to GSe Alphabet Consolidated EBIT

Play % Fixed Costs	Headwind to Google Play Revenues						
	65%	60%	55%	50%	45%	40%	35%
75%	-16.7%	-15.4%	-14.1%	-12.8%	-11.5%	-10.2%	-8.9%
67%	-16.2%	-14.9%	-13.6%	-12.3%	-11.0%	-9.7%	-8.4%
58%	-15.7%	-14.4%	-13.1%	-11.8%	-10.5%	-9.2%	-7.9%
50%	-15.2%	-13.9%	-12.6%	-11.3%	-10.0%	-8.7%	-7.4%
42%	-14.7%	-13.4%	-12.1%	-10.8%	-9.5%	-8.2%	-6.9%
33%	-14.2%	-12.9%	-11.6%	-10.3%	-9.0%	-7.7%	-6.4%
25%	-13.7%	-12.4%	-11.1%	-9.8%	-8.5%	-7.2%	-5.9%

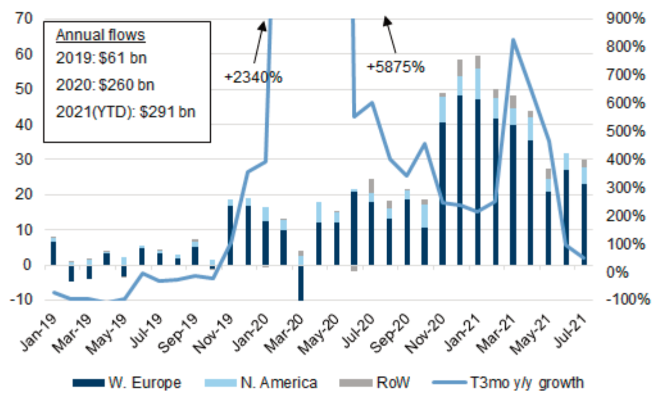
Shows the % difference vs. our base case 2023 GOOGL EBIT estimates

Source: Company data, Goldman Sachs Global Investment Research

ESG

ESG based investing has garnered elevated levels of interest in recent times and we believe that this will persist. As noted in our GS SUSTAIN team's note, GS Sustain: ESG Tracking, monthly inflows continue to deliver significant YoY growth with ESG continuing to take share - ESG flows as a percentage of global equity flows was 47% in July, higher than the ~30-40% of total equity fund inflows in recent months. As ESG continues to gain traction, we focus on a few key areas that are material to companies in the Internet space across the subsectors of eCommerce, Digital Advertising, Streaming, Ridesharing, Food Delivery and Travel- namely, reduction of carbon emissions (becoming net zero), diversity and inclusion (D&I) and minority shareholder rights (especially in founder led companies).

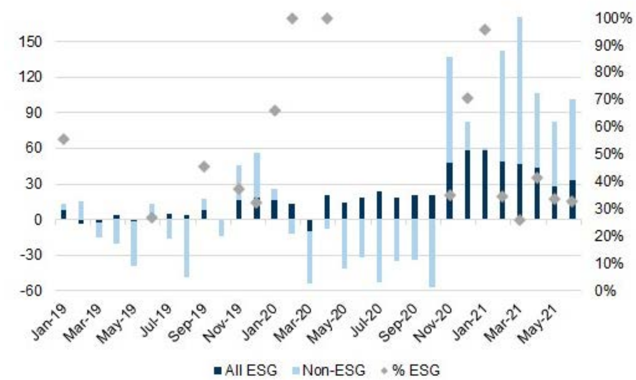
Exhibit 115: The past eightnine months have been the strongest eight nine on record for ESG inflows



Monthly ESG fund flows by fund region of domicile (LHS)(bnUSD); trailing 3 month y/y ESG flows growth (RHS)

Source: Morningstar, Goldman Sachs Global Investment Research

Exhibit 116: ESG funds took 47% in July (higher than the 30-40% range of recent months) of fund inflows despite representing only 9% of total fund AUM



Monthly equity fund flows for ESG & Non-ESG funds; % of overall fund flows that are ESG

Source: Morningstar, Goldman Sachs Global Investment Research

Below we outline ESG initiatives for the 17 companies we are initiating on.

Exhibit 117: ESG Initiatives by Company

Company	Description
ABNB	Committed to using 100 % renewable energy to power global operations 55% of hosts are women Co-founders collectively beneficially own just under 50% of voting power of shares
BKNG	Operationally carbon neutral as of 2020 and invests in carbon offset projects As of 2020, ~50% of employees, ~22% of tech positions & ~30 of extended leadership team are women Majority of the Board (including the Chairman) is independent
EXPE	Carbon neutral since 2017 and striving for 100% green energy at global offices in 2031 Launched sustainable tourism pledge with UNESCO As of 2020, ~51% of employees are women Majority of Board is independent, but Chairman owns stock representing ~30% of voting power
DASH	Partnered with Watershed to assess full carbon impact Runs prevention of food wastage and waste reduction programs Multi-class share structure with Co-founders collectively holding a control position as it relates to voting power of outstanding capital stock
UBER	Targeting being a zero emission platform by 2040, zero emissions from corporate operations by 2030 and net zero climate emissions by 2040 Majority of the board including the chairman is independent
LYFT	Committed to 100% electric vehicles by 2030 but ended carbon offset program in 2020 While majority of Board is independent, co-founders hold a combined ~35% voting power
NFLX	Committed to achieving net zero emissions by 2022 Aims to use 100% renewable energy to power global operations CEO does not have controlling voting rights and majority of the board is independent
SPOT	Offices run on 100% renewable energy CEO is chairman of the board though Majority of the board is independent Collects personal data for targeted ads making privacy an area of discussion
PTON	CEO is chairman of the board and has 29.7% voting power, with board having 58.3% voting power $100m fund for fighting racial injustice ESG roles embedded in functional teams
FB	Achieved net zero emissions in operations & targeting net zero emissions across value chain by 2030; all data centers supported by 100% renewable energy Majority voting control & board membership (Chairman) for Founder/CEO
GOOGL	Carbon neutral (incl. legacy footprint); target of 24x7 carbon free energy by 2030; issued largest corporate sustainability bond in 2020 and matches all energy use with green energy purchase Majority voting control & board membership for Founders
PINS	Commitment to hiring historically under-represented groups (e.g. ~50% of global employees are female) Founder/CEO has significant voting control (albeit not majority voting control unlike several other companies under our coverage) and is Chairman of the Board of Directors
SNAP	Carbon neutral as of 2021 and committed to purchase 100% of renewable energy at facilities globally Majority voting control for Founder/CEO; board controls significant voting majority
TWTR	Committed to 100% carbon neutral power sourcing at existing data centers by 2022; purchases offset projects to neutralize carbon footprint Majority of board remembers (including Chairman) are independent
AMZN	Target 100% renewable energy use by 2025, net zero carbon by 2040, 100,000 EVs for delivery by 2030 and 50% shipments at net zero carbon by 2030 Majority of the board including the Chairman is independent, with Chairman owning 14% common stock Has added sustainability certification to products that meet requisite standards Employee relations, impact on small businesses and anti-competitive behavior remain debates
EBAY	Committed to achieve 50% absolute reduction in Scope 1 and 2 Greenhouse Gas (GHG) emissions by 2025 and 75% reduction by 2030 from the 2016 baseline Committed to sourcing 100% of electricity supply from renewable energy sources by 2025 for eBay-controlled data centers and offices Majority of the board including the Chairman is independent 100% rating for equality and inclusion on the Corporate Equality Index Part of the Dow Jones Sustainability Index
CHWY	The role of CEO and Chairman of the board are held by separate persons Chairman of the board is the Chairman of the company that holds 100% of Class B stock and 97.3% voting power Launched pet adoption service in 2021 in conjunction with over 6000 shelters Featured on Comparably's 2020 top rankings for Best Company Culture and Best Companies for Women

Source: Company data, Goldman Sachs Global Investment Research

Valuation Framework

Our valuation framework for US Internet companies utilizes a two-pronged approach with equally weighted methodologies: 1) a multiple to growth approach on a medium term estimate (two year forward); & 2) a discounted analysis on a longer term (five year) estimate of profitability. Our price target is the base case scenario of this valuation approach applied to our published estimates.

For growth companies (~20%+ revenue growth in the forward 2-3 years) that two pronged approach involves: 1) either an enterprise value (EV) to revenue or gross profit (depending on our determination of the reflective topline economic driver of the business) with a multiple reflective of the growth in that metric (based on the '21-'23 CAGR) and referencing a ratio range of ~0.1x-0.3x (the historical range of the entire US internet sector over the past ~20 years) & 2) applying an EV to EBITDA multiple to growth on a 5 year out EBITDA (including the impact of stock based compensation) discounted back 3 years to align with our 2 year forward approach on revenue/gross profit. These two valuation approaches are each weighted 50% in our analysis.

For more mature companies (~20% or lower growth in the forward 2-3 years) that two-pronged approach involves: 1) an EV to EBITDA (adjusted for stock based comp) with a multiple reflective of the growth in that metric (based on the '21-'23 CAGR) and referencing a ratio range of ~0.1x-0.3x (the historical range of the entire internet sector over the past ~20 years); & 2) an EV to FCF multiple to growth on 5 year out FCF (including the impact of stock based compensation) discounted back 3 years to align with our 2 year forward approach on EBITDA. These two valuation approaches are each weighted 50% in our analysis.

For each company, we stress test our base case operating estimates on revenue, EBITDA & FCF and apply a range of higher/lower multiples on those stressed operating estimates to arrive at an upside and downside scenarios to company valuation. This creates a skew between the upside vs the downside from current price levels. Our risk/reward matrix for the coverage universe shows upside/downside to PT on the x-axis and skew of upside vs downside from current price on the y-axis (Exhibit 15). The companies in the upper right-hand portion of the matrix provide the most compelling positive opportunities in the group. The companies in the lower left portion of the matrix are the least compelling opportunities in the coverage universe.

For a number of companies, we have factored into enterprise value the stakes in other companies that are not reflected in their consolidated operating results.

Further, for a handful of companies (where there are significantly divergent segment revenue growth and/or profitability), we have also sanity checked our valuation work by introducing a sum-of-the parts approach for those companies.

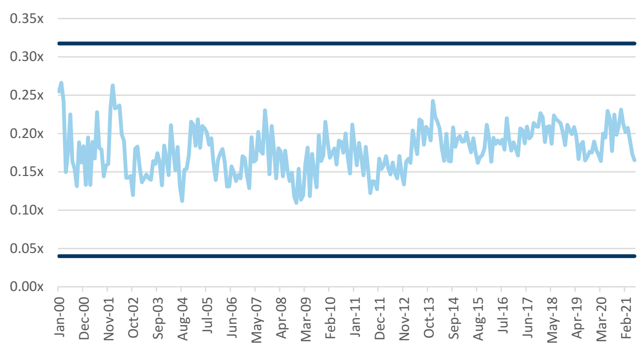
Below we include multiple-to-growth ratios for Sales, Gross Profit (GAAP), EBITDA (GAAP), and FCF over the past 10-20 years for the entire internet sector.

- Average EV/Sales-to-Growth ratio of ~0.18x (within +/-1 standard deviation range of

~0.04-0.32x)

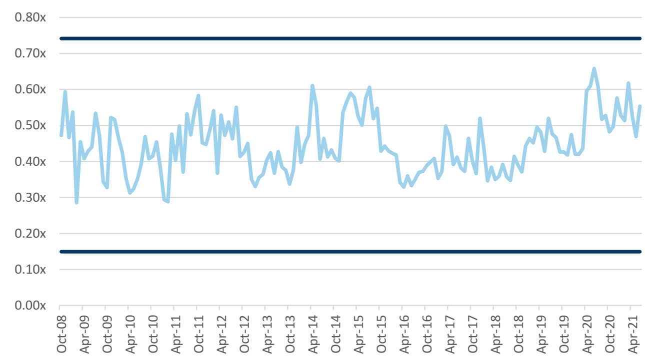
- Average EV/Gross Profit-to-Growth ratio of ~0.45x (within +/-1 standard deviation range of ~0.15-0.74x)
- Average EV/EBITDA-to-Growth ratio of ~0.81x (within +/-1 standard deviation range of ~0.55-1.07x)
- Average EV/FCF-to-Growth ratio of ~1.39x (within +/-1 standard deviation range of ~0.80-1.98x)

Exhibit 118: EV/Sales-to-Growth - Historical Trading Range
2000-2021



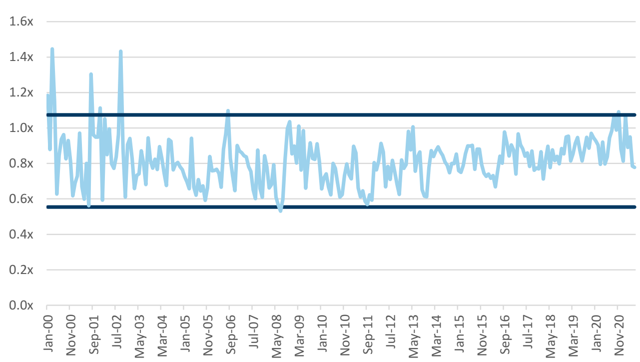
Source: FactSet, Company data, Goldman Sachs Global Investment Research

Exhibit 119: EV/Gross Profit-to-Growth Historical Trading Range
2008-2021



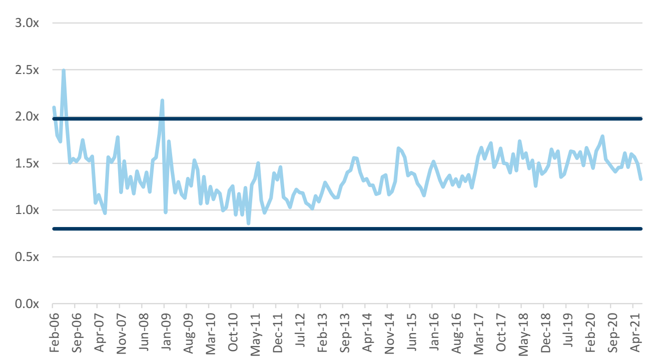
Source: FactSet, Company data, Goldman Sachs Global Investment Research

Exhibit 120: EV/EBITDA-To-Growth Historical Trading Range
2000-2021



Source: FactSet, Company data, Goldman Sachs Global Investment Research

Exhibit 121: EV/FCF-To-Growth
2006-2021



Source: FactSet, Company data, Goldman Sachs Global Investment Research

Within the second prong of our valuation methodology, we apply a ~12% discount rate to our 2026 estimates (either GAAP EBITDA or FCF-SBC depending on the company). As can be seen in the chart below, the 12% discount rate represents CAPM using: (1) the normalized 10-year treasury bill (representing 20 years of annual data); (2) the 20-year annualized return of the S&P 500; & (3) the average 5-year beta of ~1.3x for companies within our coverage universe. We then apply the average discount rate of ~12% across all companies on either FY26 GAAP EBITDA or FY26 FCF-SBC estimates and discount it back 3 years.

Exhibit 122: Discount Rate Drivers

	Discount Rate	Risk-free Rate	Beta	Equity risk premium
ABNB	11.1%	3.0%	1.15	7.0%
AMZN	11.1%	3.0%	1.15	7.0%
BKNG	11.8%	3.0%	1.26	7.0%
CHWY	11.1%	3.0%	1.15	7.0%
DASH	13.5%	3.0%	1.50	7.0%
EBAY	11.1%	3.0%	1.15	7.0%
EXPE	13.5%	3.0%	1.50	7.0%
FB	12.1%	3.0%	1.30	7.0%
GOOGL	10.1%	3.0%	1.01	7.0%
LYFT	13.5%	3.0%	1.50	7.0%
NFLX	9.9%	3.0%	0.98	7.0%
PINS	11.9%	3.0%	1.27	7.0%
PTON	11.4%	3.0%	1.20	7.0%
SNAP	11.9%	3.0%	1.27	7.0%
SPOT	13.7%	3.0%	1.53	7.0%
TWTR	11.6%	3.0%	1.23	7.0%
UBER	13.5%	3.0%	1.50	7.0%
Average	**12%**		**1.3**	

Source: FactSet, Goldman Sachs Global Investment Research

Alphabet (GOOGL, Buy, $3,350 PT): The Mobile Computing Utility Platform

Investment View

We are initiating coverage on Alphabet (GOOGL) with a Buy rating and a price target of $3,350. Alphabet is the industry leader in digital advertising (led by search), has compounded revenue growth at a ~20%+ CAGR for over a decade (pre-COVID) and, yet, still has exposure to array of upside optionality across a number of secular growth tailwinds (media consumption, cloud computing, local commerce, omnichannel commerce, gaming, hardware, computational shifts to AI/ML, etc.). We remain bullish that Alphabet plays a critical role at the utility layer of global mobile computing across an array of products, including: browser, search, media, maps, storage, mail, application store & the personalization of computing. While being in a position of industry leadership, we see Alphabet management committed to investing in new avenues of growth and product innovation – these most notably include cloud computing, autonomous driving, AI/machine learning, hardware, quantum computing & health care.

In this initiation, we frame the Alphabet investment case around three key debates: **1) Does Alphabet have levers to maintain mid-teens consolidated revenue growth in the coming years?** Our view - Yes. We see search remaining a solid ~10%+ growth business over our 5 year forecasts period and see higher growth contributions from other emerging (non-search) segments, including YouTube, Cloud, Maps, etc. **2) Will Alphabet's core and consolidated operating margins remain stable and/or demonstrate leverage post-COVID?** Our view – Uncertain. We note a few key factors: a) core margins showed leverage in 2H'20/1H'21 which, while some of that will likely reverse, is an indicator of underlying margin stability; & b) we see heavy levels of Cloud & Other Bets investments producing a mixture of improving profitability from current levels and/or amplifying equity returns through business scaling and forward operating leverage; **3) Can a mix of moderating investments, scale in new initiatives and shareholder returns amplify earnings per share growth and equity returns?** Our view – Yes. An examination of Alphabet's margin structure, FCF generation and high cash balance could provide the stimulants for a very healthy mix of EPS growth and shareholder returns in the coming years.

We see Alphabet generating a '21-'26 consolidated gross revenue CAGR of ~15% (driven by Search & Other of ~12%, YouTube Ads of ~21%, Network of ~5%, Cloud of ~30% and Google Other of ~14%) and a 2026 consolidated EBIT margin of 37% (up from 27.5% in 2020) driven by a mixture of stable/slightly rising Google Services operating margins, improving Google Cloud operating margins and reduced Other Bets losses. While we are constructive from current levels, we do recognize a risk to the downside being the stock's recent strong performance (+82% TTM vs. SPX +32%; best performing mega cap internet stock YTD at +65%). For that reason, we still see a positive risk/reward from these levels on a 12-18 month view but recognize the possibility of some volatility in the shares over a shorter-term (3-6 month) time frame.

GS Internet Investing Framework

Alphabet screens positively as we apply the key themes and tenets of our Goldman Sachs Internet Investing Framework, including: a) exposure to a number of large and growing TAMs; b) stable to rising market share dynamics (depending on end market exposure); c) potential for rising operating margins in coming years; d) a collection of innovative investments on future computing trends; e) the ability to deploy capital back to shareholders; & f) a reasonable risk/reward from current levels on historical valuation. Like its mega cap Internet peers, Alphabet will likely continue to face government regulatory scrutiny and industry practice shifts in terms of potential headwinds to business trends and stock performance. All of our industry analysis and idiosyncratic fundamental work supports our thesis for the long-term.

Exhibit 123: Ten Factor Investment Framework - Alphabet (GOOGL)

GS Ten Factor Investment Framework – Alphabet (GOOGL)

Growth & Market Share	
1) TAM & Revenue Growth	• GSe global (ex-China) digital ad spend will grow at a ~18% '21-'26 CAGR to reach ~$862bn by 2026 (incl. a US CAGR of ~16% to ~$431bn), driven by a steady increase in penetration of total advertising services spend • We est. total gross revs to grow at a ~15% '21-26 CAGR, driven by steady growth in core advertising revenues & increasing contribution from other non-ad segments (esp. Cloud)
2) Market Share Within Industry Sector	• Consolidating market share within advertising (natural ceding of share given scale/market leading position) • Share taker within Cloud industry vs. two larger incumbents
Unit Economics & Margins	
3) Unit Economics	• Number of underlying variables driving consolidated margins, including: a) core Search margins roughly ~stable; b) low YouTube margins (content costs/rev share); c) net operating loss within Cloud, which should improve to industry averages at scale; & d) heavy investments in Other Bets • GSe consolidated EBIT margins expanding an avg of ~150bps/year (from 27.5% in 2020 to 37% in 2026).
Optionality & Capital Returns	
4) Optionality & Innovation	• Long-term investments in support of long-tailed opportunities across digital video (YouTube scaling engagement/monetization), consumer/enterprise computing and Other Bets (most notably Waymo & Verily)
5) Capital Deployment & ROI	• Less focused on optimizing short-to-medium-term margins & continuing to balance strong FCF generation with longer-term opptys and consistent shareholder returns (mostly through share buybacks) • Stable-to-declining losses in key investment areas could act as a tailwind to operating margins above GSe
Outside Factors	
6) Regulation	• Increased regulatory scrutiny over the past few years across several key areas (data privacy, antitrust/market share, etc.) • Outstanding antitrust matters, including US DOJ & US State AGs lawsuits • Data privacy remains key industry theme (albeit w/ GOOGL being one of several platforms at the forefront)
7) ESG	• Carbon neutral (incl. legacy footprint); target of 24x7 carbon free energy by 2030; issued largest corporate sustainability bond in 2020 and matches all energy use with green energy purchase • Majority voting control & board membership for Founders
Estimates & Market Dynamics	
8) Stock Trading Dynamics	• GOOGL +82% over the past 12 months vs. SPX +32% • Current RSI of 71 (vs. coverage universe of 56) • Screens as a "GARP" stock with potential for upside surprise (on a mix of sustained growth, margin expansion & cash returns)
9) GS Estimates vs. Street	• ~100bps & ~200bps above Street on '21 & '22 consolidated gross revenues (respectively) • ~60bps below & ~100bps above Street on '21 & '22 Gross Margin (respectively) • ~180bps & ~80bps below Street on '21 & '22 Operating Margin (respectively)

10) Current Valuation vs. Historical Trends	• Over the past 3 years, GOOGL has traded at an
	  • EV/GAAP EBITDA range of 11x to 15x
	  • EV/EBITDA-to-Growth range of 0.5x to 0.6x

Source: Company data, Goldman Sachs Global Investment Research, FactSet

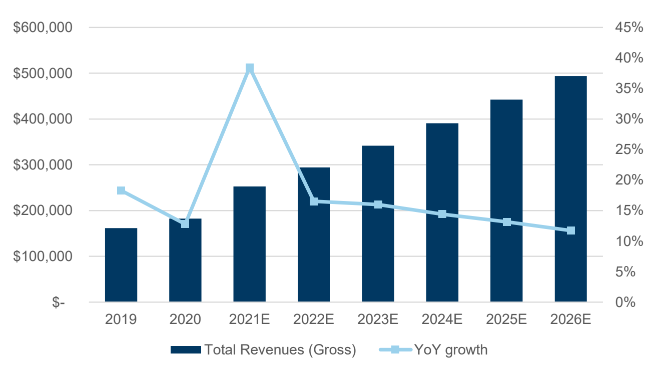
Three Key Debates & Our View

Key Debate #1: Does Alphabet have levers to maintain mid-teens consolidated revenue growth in the coming years?

Our view – Yes. Alphabet has market leadership from a number of aspects of its business model – the company's core business has exposure to the ~$862bn 2026 TAM for global (ex-China) digital advertising, of which Alphabet currently has leading market share. In addition, Alphabet has 1bn+ users on a number of its key desktop/mobile computing applications (Gmail, Search, Chrome, Android, Google Play, YouTube etc.). Alphabet also has exposure to (& increasing market share within) a number of emerging, non-advertising areas such as cloud computing, media consumption, hardware, personalized computing, AI/ML applications & longer dated shifts in health care and transportation. Despite its market leadership position, we still see Alphabet producing revenue growth well above global GDP growth during our 5-year forecasting period. Even within its core Search business (which investors have consistently questioned the durability of), we expect that steady product innovation (e.g. product listing ads, local ads, Discover) will drive better than feared growth in the coming years.

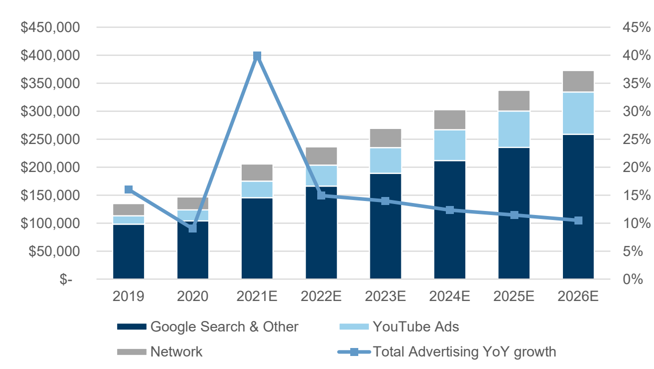
While Alphabet is naturally ceding some relative market share within digital advertising (given its current scale and market leading position in terms of absolute ad revenue dollars), the company is still taking share of secular shifts of offline advertising dollars moving online (especially ad supported media consumption via YouTube). In addition, we see Alphabet as a share taker vs. the two large incumbents within the cloud computing industry. That being said, despite its size and positioning, Alphabet does face heavy competition from a mixture of online and offline competitors within each of its core end markets.

Exhibit 124: Alphabet Total Consolidated Gross Revenues
$mm, '19-'26



Source: Company data, Goldman Sachs Global Investment Research

Exhibit 125: Google Gross Advertising Revenues, by Segment
$mm, '19-'26



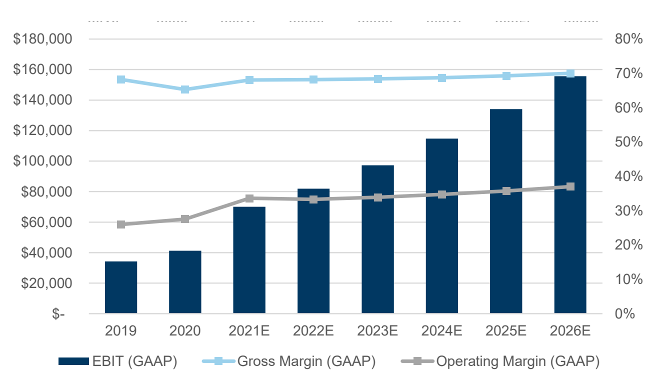
Source: Company data, Goldman Sachs Global Investment Research

Key Debate #2: Will Alphabet's core and consolidated operating margins remain stable and/or demonstrate leverage post-COVID?

Our view – Uncertain. In terms of gross/operating margins, Alphabet has a number of headwinds/tailwinds on a consolidated basis that result in a complicated forward margin trajectory (albeit additional company disclosures over the past few years have helped gain a better understanding of the underlying dynamics). The main takeaways from such disclosures and our fundamental work include: a) Google's search business has relatively stable margins (albeit with a rising mobile TAC that impacts net revenue recognition as opposed to margins); b) low margins for YouTube (due to content costs/revenue share agreements pressuring gross margins); c) while its Cloud business is currently operating at a net loss, we see no reason why Google Cloud cannot attain a similar level of EBIT margins as incumbents (AWS, etc.) at scale; & d) heavy losses in Other Bets (cumulative operating losses of ~$25bn over the past 8 years). The key variables for margin leverage in coming years will be a) increased scale in its YouTube business, reversing margin trajectory in Cloud and investments in Other Bets yielding more accretive outcomes to Alphabet's consolidated P&L.

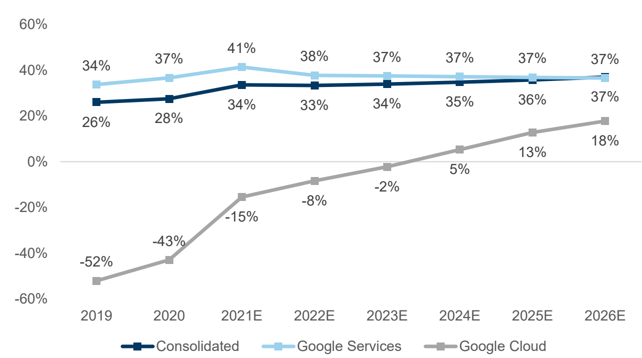
We see Alphabet management as committed to making long-term investments in support of long-tailed opportunities in consumer/enterprise computing and less focused on optimizing for short/medium term operating margins. In particular, the main areas of sustained margin headwinds (albeit ones where the 2nd derivative might be improving) remain YouTube scaling its engagement/monetization opportunity, building scale in cloud computing and allocating opex/capex to Other Bets (most notably in Waymo and Verily). In addition, we expect Alphabet to remain focused on hiring (despite high levels of headcount growth over the past 3-5 years) in order to have talent aligned with its ambitions. With the shift to new management (CEO Sundar Pichai & CFO Ruth Porat) over the last 5-6 years, we have seen a rise in incremental shareholder disclosures that have added more clarity & transparency into the core underlying margin drivers within the consolidated operating results.

Exhibit 126: Alphabet GAAP Gross Margin & Operating Income
$mm, '19-'26



Source: Company data, Goldman Sachs Global Investment Research

Exhibit 127: Alphabet Segment Operating Income Margins
'19-'26



Source: Company data, Goldman Sachs Global Investment Research

Key Debate #3: Can a mix of moderating investments, scale in new initiatives and shareholder returns amplify EPS growth and equity returns?

Our view – Yes. In terms of capital deployed and allocated within its business, Alphabet is a tale of two cities: despite generating over $147bn of 5-year cumulative FCF and having ~$121.5bn of net cash on the balance sheet as of Q2 '21 operating results, Alphabet also has combined operating losses of ~$27bn in Other Bets and Cloud over the past 3 years. In addition, Alphabet has increased shareholder returns in the form of buybacks over the past ~3-4 years (with a cumulative ~$85bn of share repurchases since Q4 2017). Looking ahead, we expect Alphabet will continue to generate significant FCF and maintain strong shareholder returns via buyback, lowering its share count (to more than offset stock based compensation) & driving EPS growth (with upside potential to GS/Street estimates). In addition, stable to declining losses in key investment areas could add a tailwind to GAAP operating margins and EPS growth above our current forecasts. Below we provide an analysis of potential for shareholder returns and earnings (per share) impacts in the next 5 years - assuming the company uses ~55% of its free cash flow generated to repurchase shares (the average since 2017), we estimate Alphabet has the potential to repurchase ~17% of its current market cap from free cash flow generated through 2026. This would represent material upside to shareholder returns vs. our current estimates.

Exhibit 128: Alphabet Potential Share Buyback Analysis

$mm, except per share data

	2017	2018	2019	2020	1H21	
Free Cash Flow	$ 23,907	$ 22,832	$ 30,972	$ 42,843	$ 29,741	
Total Share Repurchases	$ 4,846	$ 9,075	$ 18,396	$ 31,149	$ 24,191	**Average:**
% of FCF	*20%*	*40%*	*59%*	*73%*	*81%*	*55%*

	2H21E	2022E	2023E	2024E	2025E	2026E
Free Cash Flow	$ 35,201	$ 79,082	$ 93,296	$ 111,393	$ 130,721	$ 151,567
% of FCF Used for Repurchases	*55%*	*55%*	*55%*	*55%*	*55%*	*55%*
Total Potential Share Repurchases	$ 19,252	$ 43,251	$ 51,025	$ 60,922	$ 71,493	$ 82,894
Stock Price*	$ 2,886	$ 3,088	$ 3,304	$ 3,535	$ 3,782	$ 4,047
Potential Shares Repurchased	7	14	15	17	19	20
GSe Share Repurchases	$ 16,000	$ 27,500	$ -	$ -	$ -	$ -
Total Potential Share Repurchases	$ 19,252	$ 43,251	$ 51,025	$ 60,922	$ 71,493	$ 82,894
% upside vs. GS ests	*20%*	*57%*	*n/a*	*n/a*	*n/a*	*n/a*
GSe Avg Diluted Shares	678	674	674	674	674	674
GSe Avg Shares Repurchased	7	11	-	-	-	-
Potential Shares Repurchased	7	14	15	17	19	20
Potential Avg Diluted Shares	678	671	659	657	656	654
Implied GAAP EPS	$ 43.34	$ 103.91	$ 125.53	$ 148.41	$ 173.90	$ 202.08
% upside vs. GS ests	*0.1%*	*0.5%*	*2.8%*	*4.3%*	*5.9%*	*7.6%*
Implied PE	***n/a***	**27.8x**	**23.0x**	**19.4x**	**16.6x**	**14.3x**
Average Assumed Price	$ 3,440					
Total Shares Repurchased (mm)	93					
Total Potential Share Repurchases	$ 328,837					
% of Current Market Cap	**16.8%**					

*assumes average share price appreciation of 7% per year

Source: Company data, Goldman Sachs Global Investment Research

GS Estimates vs. Consensus

Exhibit 129: Alphabet GS Estimates vs. Consensus
$mm, except per share data

	Q3 2021			2021			2022		
	GS Est	Cons Est	% GS vs. Cons	GS Est	Cons Est	% GS vs. Cons	GS Est	Cons Est	% GS vs. Cons
Google Segment Revs (Gross)	$ 64,225	$ 62,656	2.5%	$ 253,111	$ 250,297	1.1%	$ 297,066	$ 291,322	2.0%
Google Services	$ 58,990	$ 57,498	2.6%	$ 233,532	$ 230,640	1.3%	$ 269,473	$ 264,772	1.8%
Google Search & Other	$ 37,400	$ 36,125	3.5%	$ 145,322	$ 143,671	1.1%	$ 166,040	$ 164,166	1.1%
YouTube Ads	$ 7,404	$ 7,361	0.6%	$ 29,637	$ 29,446	0.7%	$ 37,628	$ 37,205	1.1%
Google Network	$ 7,722	$ 7,448	3.7%	$ 30,716	$ 30,161	1.8%	$ 32,672	$ 32,329	1.1%
Google Other	$ 6,464	$ 6,563	-1.5%	$ 27,857	$ 27,362	1.8%	$ 33,133	$ 31,071	6.6%
Google Cloud	$ 5,235	$ 5,158	1.5%	$ 19,580	$ 19,657	-0.4%	$ 27,593	$ 26,550	3.9%
Other Bets	$ 199	$ 203	-1.7%	$ 809	$ 803	0.7%	$ 874	$ 910	-4.0%
Consolidated Gross Revs	$ 64,425	$ 63,361	1.7%	$ 253,804	$ 250,985	1.1%	$ 297,940	$ 292,877	1.7%
TAC (Total)	$ (11,713)	$ (11,222)	-4.4%	$ (45,293)	$ (44,598)	-1.6%	$ (51,995)	$ (50,376)	-3.2%
Consolidated Net Revs	$ 52,711	$ 52,139	1.1%	$ 208,511	$ 206,386	1.0%	$ 245,945	$ 242,502	1.4%
Google Services OI	$ 20,480	$ 20,759	-1.3%	$ 85,980	$ 85,943	0.0%	$ 92,568	$ 94,596	-2.1%
Google Cloud OI	$ (785)	$ (949)	17.2%	$ (3,031)	$ (3,378)	10.3%	$ (2,302)	$ (2,457)	6.3%
GAAP EBITDA	$ 20,562	$ 21,433	-4.1%	$ 84,025	$ 84,141	-0.1%	$ 98,682	$ 97,609	1.1%
GAAP EPS	$ 21.00	$ 23.86	-12.0%	$ 96.84	$ 101.58	-4.7%	$ 103.40	$ 108.28	-4.5%

Source: Company data, Goldman Sachs Global Investment Research, FactSet

Valuation & Risk/Reward Framework

Referencing our valuation framework, we apply the two-pronged approach for more mature companies (~20% or lower growth in the forward 2-3 years) to our Alphabet price target. Our $3,350 12-m price target is based on an equal blend of: (1) EV/GAAP EBITDA applied to our 2023 estimates and; (2) a modified DCF using an EV/(FCF-SBC) multiple applied to our 2026 estimates discounted back 3 years. Specifically:

- 17.5x EV/GAAP EBITDA (or 1.0x EV/EBITDA-to-growth) applied to our 2023 estimates. Our 17.5x multiple represents the 2-year average mature digital ad platform peer group (incl. GOOG, FB & TWTR) multiple.
- 25x EV/FCF-SBC multiple applied to our 2026 estimates discounted back 3 years at 12%. The discount rate represents CAPM using the blended average of companies within our coverage universe consisting of: (1) 3% risk free rate (based on the normalized 10-year rate); (2) average beta of ~1.3; (3) equity risk premium of 7%.

Exhibit 130: Alphabet Price Target Analysis
$mm, except per share data

Scenario Analysis	Downside	Base	Upside
Valuation	$ 1,830	$ 3,350	$ 4,890
% upside/downside	*-37%*	*16%*	*69%*
Sales (FY22E)	$ 226,269	$ 245,945	$ 265,621
Downside/Upside Adjustment	*-8%*	-	*8%*
Sales (FY23E)	$ 258,166	$ 286,852	$ 315,537
Downside/Upside Adjustment	*-10%*	-	*10%*
EV / 2023 Sales (Implied)	4.0x	7.2x	9.8x
Sales CAGR ('21-'23)	11.3%	17.3%	23.0%
EV / Sales to Growth (Implied)	0.36x	0.42x	0.43x
GAAP EBITDA (FY22E)	$ 85,982	$ 98,682	$ 108,904
EBITDA Margin %	38.0%	40.1%	41.0%
GAAP EBITDA (FY23E)	$ 95,522	$ 115,070	$ 132,525
EBITDA Margin %	37.0%	40.1%	42.0%
EV / 2023 EBITDA	10.0x	17.5x	24.0x
EBITDA CAGR ('22-23)	6.6%	17.0%	25.6%
EV / EBITDA to Growth	1.51x	1.03x	0.94x
Enterprise Value	$ 955,216	$ 2,013,725	$ 3,180,611
FCF-SBC (FY26E)	$ 100,956	$ 119,177	$ 134,608
FCF % of Sales	24.0%	28.3%	32.0%
EV / 2026 FCF-SBC	17.0x	25.0x	30.0x
FCF-SBC CAGR ('23-26)	12.1%	18.5%	23.4%
EV / FCF-SBC-to-Growth	1.40x	1.35x	1.28x
Discount Rate	15.0%	12.0%	10.0%
Discount Period (Years)	3	3	3
Enterprise Value (2025)	$ 1,716,255	$ 2,979,415	$ 4,038,248
Discounted Enterprise Value (2022)	$ 1,128,466	$ 2,120,689	$ 3,033,995
Weightings			
EV derived from GAAP EBITDA	50%	50%	50%
EV derived from (FCF-SBC)	50%	50%	50%
Enterprise Value	$ 1,041,841	$ 2,067,207	$ 3,107,303
Capital Structure Adjustments			
Adjusted Net Debt - 2022E	$ (192,317)	$ (192,317)	$ (192,317)
Adjusted Shares Outstanding	674	674	674

Source: Company data, Goldman Sachs Global Investment Research

In addition to our base case PT, we arrive at an upside/downside valuation scenario analysis by stress testing our base case operating estimates (revenue, EBITDA & FCF) and applying a range of higher/lower multiples. Our applied upside/downside multiples on GAAP EBITDA and FCF-SBC (discounted back) results in an upside/downside skew of ~2:1 from current levels.

Key Risks

Risks to our Buy rating include:

- Competition of product utility levels and advertising dollars;
- Headwinds to monetizable (product) search from industry disruption;
- Shifting media consumption habits;
- Heavy investments depress operating margins for longer than our forecasts;
- No/low levels of incremental shareholder returns going forward; &
- Regulatory scrutiny and industry practices altering the business model's prospects.

In addition, Alphabet is exposed to the volatility caused by the global macroeconomic environment & investor risk appetite for growth stocks.

Company Description

Alphabet is a global conglomerate comprised of two main revenue reporting segments: Google, its largest segment comprised of Google Services (including Search & Other, YouTube Ads, Network & Google Other) and Google Cloud; and Other Bets, which encompasses all non-Google businesses and mostly involves Alphabet's relatively earlier stage ventures. Google offers many applications & services, including a mobile operating system, web browser, email, search engine and online streaming platforms, and has several platforms with over 1bn MAUs. In 2020, Alphabet reported consolidated gross revenues of $182bn, with a segment breakdown of: Google Services 93%; Google Cloud 7% and Other Bets <1%.

Facebook (FB, Buy, $455 PT) - The Leading Social + Mobile Platform Continues Its Evolution

Investment View

We are initiating coverage on Facebook (FB) with a Buy rating and a price target of $455. Facebook is the industry leader in social media across its array of social Feed and Messaging application, which has 2.8bn people using at least one of their services (core Facebook, Instagram, Facebook Messenger, WhatsApp & Oculus) daily as of June 2021. While the short-term is likely to see some digestion of recent COVID-19 tailwinds to user growth and time spent, we don't see Facebook's utility in mobile computing receding in the coming years. In addition, we see Facebook management's focus on investing against long-tailed platform shifts in video, commerce, payments, messaging & augmented reality (incl. the Metaverse) to continue to evolve the platform in terms of its utility to consumers and advertisers/businesses over the medium/long term. We see Facebook as one of the companies most levered to the theme of the blurring of the lines between commerce and advertising and many of its key properties have already begun the transformation to embrace social commerce. In addition, our analysis continues to show that consumer behavior through 2020/2021 has accelerated the adoption of eCommerce, with forward growth resuming off a higher point of end market penetration. In essence, the biggest impact of COVID-19 has been an acceleration of the economy's digitalization (discovery of products, shopping experience, communication tools, media consumption).

In this initiation, we frame the Facebook investment case around three key debates: **1) Does Facebook have levers to maintain mid-teens (or better) consolidated revenue growth in the coming years?** Our view – Yes. We see a mixture of products (Newsfeed pricing, increased commerce, video, etc.) driving price per ad impression higher; **2) Will Facebook's mix of core business and long-term initiatives produce stable margins in the coming years?** Our view – Yes. We expect Facebook to maintain ~mid 40s% GAAP EBITDA margins over our forecast period as management strikes a balance between investments (talent & product incl. commerce, AR, payments, messaging) against strong incremental margins from ad price inflation in its core business; & **3) What is the prospect for shareholder returns & long-tailed investments (& its impact on valuation)?** Our view – we believe Facebook can balance this approach to drive equity returns (we provide an analysis of potential for shareholder returns and earnings per share impacts to illustrate this).

We see Facebook generating a '21-'26 revenue CAGR of ~17% (driven predominantly by advertising revenue across core Facebook & Instagram) and a 2026 EBIT margin of 40% (compared to 38% in 2020) as Facebook continues to invest in talent, computing infrastructure and R&D against its long-term platform initiatives. While Facebook has been an outperformer YTD (+40% vs SPX +20%), we look at a reasonable EV/EBITDA and EV/FCF multiples when compared to compounded growth rates, the ability to sustain well above industry growth and long-term upside optionality (commerce, creator economy, the Metaverse, etc.) just beginning to come into focus. One key short-term debate will be the degree to which Facebook's ad revenue decelerates (due to tougher year-over-year comps and privacy headwinds) in 2H'21 as a driver of investors' view about the level at which revenue growth will compound in the coming years.

GS Internet Investing Framework

Facebook screens positively as we apply the key themes and tenets of our Goldman Sachs Internet Investing Framework, including: a) a large and growing TAM; b) product innovation; c) industry leadership; d) pricing inflation dynamic; e) increasing shareholder returns; & f) attractive valuation vs forward growth assumptions. Two areas of our framework where Facebook screens less positive are around regulatory exposure (data collection, privacy, content moderation, market share dynamics, etc.) and ESG (with its concentration of shareholder voting control). That being said, all of our industry analysis & idiosyncratic fundamental work supports our thesis for the long term.

Exhibit 131: Ten Factor Investment Framework - Facebook (FB)

GS Ten Factor Investment Framework – Facebook (FB)

Growth & Market Share	
1) TAM & Revenue Growth	• GSe global (ex-China) digital ad spend will grow at a ~18% '21-'26 CAGR to reach ~$862bn by 2026 (incl. a US CAGR of ~16% to ~$431bn), driven by a steady increase in penetration of total advertising services spend • We est. FB ad revs to grow at a ~17% '21-26 CAGR, driven by a mix of products/factors (Newsfeed pricing, increased commerce, video, etc.) driving price per ad impression higher
2) Market Share Within Industry Sector	• Consolidating market share within advertising (natural ceding of share given scale/market leading position) • Industry leader taking share of secular shifts of offline ad budget moving online & well positioned for new secular growth drivers (social commerce, payments, AR/VR)
Unit Economics & Margins	
3) Unit Economics	• Consolidated margins ~stable to modestly improving as mgmt. balances tailwinds (high-margin ad price inflation, improving margins for low/no monetizing platforms/product currently) with headwinds (mix shift of lower-margin geos/ad formats; heavy investments in talent/product for long-term opptys, etc.) • GSe EBIT margins expanding an avg of ~30bps/year (from ~38% in 2020 to ~40% in 2026).
Optionality & Capital Returns	
4) Optionality & Innovation	• Long-term investments in support of long-tailed opportunities across commerce, creators (revenue share) payments & AR/VR and Metaverse
5) Capital Deployment & ROI	• Less focused on optimizing short-to-medium-term margins & continuing to balance strong FCF generation with longer-term opptys and consistent shareholder returns (mostly through share buybacks) • Potential upside to future shareholder returns given strong net cash position & difficult M&A landscape
Outside Factors	
6) Regulation	• Increased regulatory scrutiny over the past few years across several key areas (data privacy, antitrust/market share, content moderation, etc.) • Notable outstanding antitrust complaint from US FTC (case refiled by FTC in Aug 2021) • Data privacy remains key industry theme (Apple's ATT poses particular headwind to FB)
7) ESG	• Achieved net zero emissions in operations & targeting net zero emissions across value chain by 2030; all data centers supported by 100% renewable energy • Majority voting control & board membership (Chairman) for Founder/CEO
Estimates & Market Dynamics	
8) Stock Trading Dynamics	• FB +35% over the past 12 months vs. SPX +32% • Current RSI of 65 (vs. coverage universe of 56) • Screens as a "GARP" stock, with current valuation screening attractive vs. forward compounded growth
9) GS Estimates vs. Street	• ~Inline vs Street on '21 & '22 total revenues (respectively) • ~Inline vs Street on '21 & '22 Gross Margin (respectively) • ~60bps above & ~40bps below Street on '21 & '22 Operating Margin (respectively)

10) Current Valuation vs. Historical Trends	• Over the past 3 years, FB has traded at an
	  • EV/GAAP EBITDA range of 11x to 15x
	  • EV/EBITDA-to-Growth range of 0.3 to 0.5x

Source: Company data, Goldman Sachs Global Investment Research, FactSet

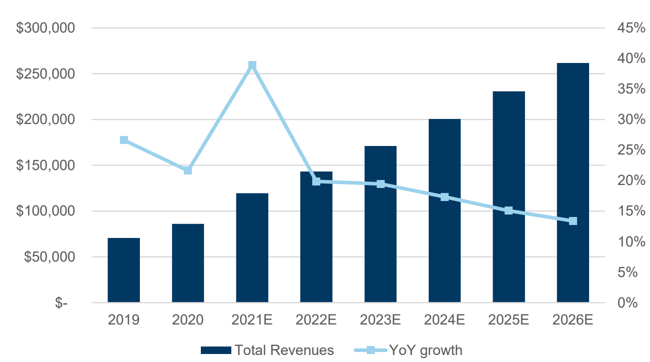
Three Key Debates & Our View

Key Debate #1: Does Facebook have levers to maintain mid-teens (or better) consolidated revenue growth in the coming years?

Our view – Yes. Facebook has a market leadership position in terms of digital advertising – the company's core business has exposure to the ~$862bn 2026 TAM for global (ex-China) digital advertising, of which Facebook currently has a leading market share. As of end of June, its products have 2.8bn people using at least one of their services (core Facebook, Instagram, Facebook Messenger, WhatsApp, Oculus) daily. The recovery of digital advertising (now trending well above pre-COVID levels) is emblematic of the capture of additional use cases and budgets/business planning of more industry verticals. Within digital advertising broadly, we see the shift from brand advertising to direct response advertising as a key industry theme, making a platform's exposure to DR advertising critical to expanding advertiser scale and creating a more robust digital advertising auction dynamic. Inline with Facebook management's comments, we model ad pricing to be the primary driver of ad revenue growth (as opposed to user growth, time spent or ad load) in the coming years. Across Facebook's products, the largest opportunities for increased monetization, in our view, remain around Reels, longer-form video, Marketplace & messaging. We continue to believe ad impression growth will come from user growth and time spent in less mature markets (albeit with headwinds in terms of mix shift as those ad impressions monetize below consolidated ad rev per impression) while, in mature markets, we expect rising ad prices to be a primary driver of growth as Facebook continues to deliver well above average industry ROIs to its 10mm+ active advertisers. Despite its market leadership position, we still see Facebook producing revenue growth well above global GDP growth during our 5-year forecasting period.

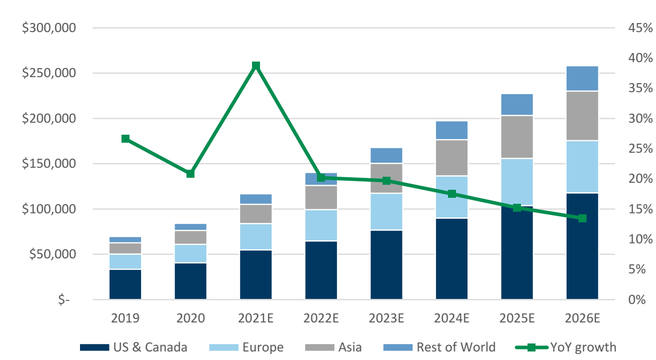
While Facebook is (roughly) holding market share within digital advertising (given its current scale and marketing leading position in terms of absolute ad revenue dollars), it is still taking share of secular shifts of offline advertising dollars moving online (especially ad supported media consumption and commerce initiatives). In terms of commerce, FB has built and deployed a full suite of commerce funnel products (Shops, Marketplace, messaging, payments) over the past 18-24 months – we expect Facebook's commerce strategy to continue to build momentum in the coming 3-5 years, similar to the way Instagram scaled from <$1bn of revs to becoming a material contributor over the last 5 years. Specifically, payments is one area where we will be focused to the degree Facebook has success (WhatsApp in India/Brazil, QR codes in Messenger, Facebook Pay on web). These areas will allow Facebook to be perceived as a market share taker of the broader commerce end market.

Exhibit 132: Facebook Total Revenues
$mm, '19-'26



Source: Company data, Goldman Sachs Global Investment Research

Exhibit 133: Facebook Advertising Revenues, by Region
$mm, '19-'26



Source: Company data, Goldman Sachs Global Investment Research

Key Debate #2: Will Facebook's mix of core business and long-term initiatives produce stable margins in the coming years?

Our view – Yes. On a consolidated basis, we model Facebook maintaining ~mid 40s%

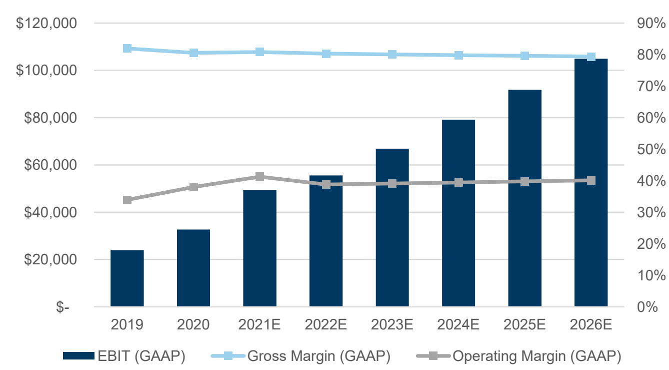
GAAP EBITDA margins over our forecast period as they strike balance between investments (talent & product incl. commerce, AR, payments, messaging) against strong incremental margins from ad price inflation in its core business. The key variables for margin leverage in coming years will be a) ad price inflation or deflation; b) yield/return on long-dated investments; & c) monetization of existing utility products above zero/low levels currently.

Pricing & ad auction dynamics remain a potential headwind which could impact revenue growth and margins. Apple's iOS 14 privacy changes (part of a broader shift toward greater degrees of consumer control over privacy) are still being highlighted by Facebook management as a source of company/industry headwind in 2H '21 (likely to see the impact most pronounced in Q3 '21). Our broader industry conversations continue to point to large scaled platforms with 1st party data and aggregated scale being able to navigate these headwinds with modest (low to mid-single digit) impacts to near-term ad revenue growth. We note that Facebook management's guidance/forward commentary across a wide range of topics has historically proved conservative, which we believe also may apply to this issue. In addition, our digital ad conversations point to Facebook being one of the key players that have developed tools and been proactive with industry outreach to help advertisers adapt to such headwinds. That being said, a mixture of industry and regulatory headwinds to advertising ROIs (translated back into Facebook ad pricing) could act as a headwind to unit economics and margins.

In terms of investments, we see Facebook most focused on continuing to scale its hiring (especially engineering talent). We expect there is likely to be some degree of investment "catch-up" across both headcount and physical real estate (data centers) post-COVID. Separately, recent press reports indicate that ~20% of Facebook's recent hiring is within Oculus/Metaverse initiatives, with overall annual net operating losses for such long-tailed investments estimated to be in the ~$2bn/year range (Facebook's recent earnings call included the comment from management that they are investing "billions of dollars annually" in these efforts, which they expect to continue into future periods). We think such a commitment to long term innovation and product development is mission critical for sustained success. In addition, we think any company disclosure along those lines (similar to prior year segment disclosure by Amazon and Alphabet) could be a positive catalyst for valuation re-rating as investors would likely apply a normalized growth rate adjusted multiple to Facebook's core earnings power.

Beyond the short/medium term, we see Facebook as the company in our coverage universe that is driving perhaps the largest incremental investment against the overall Metaverse opportunity. Beginning with the acquisition of Oculus in 2014, Facebook has continued to invest and emphasize that a combination of social connectivity and AR/VR could emerge as the next fundamental shift in computing. In this report, we also discuss how we see the concept of the Metaverse as a key component of the shift from Web 2.0 to Web 3.0 in the next 5-10 years (see our "10 Themes" section for more detail). In our view, Facebook has the platform, assets and capabilities/willingness to invest that could set them up to maintain an industry leadership position as the industry evolves through this paradigm shift. The key to capitalizing on this shift will remain user adoption (reasonably priced and ease of use hardware & content and use cases that drive consumer adoption).

Exhibit 134: Facebook GAAP Gross Margin & Operating Income
$mm, '19-'26



Source: Company data, Goldman Sachs Global Investment Research

Key Debate #3: What is the prospect for shareholder returns & long-tailed investments (& its impact on valuation)?

Our View – We believe Facebook can balance this approach to drive equity returns. Facebook has ~$64bn of net cash on its balance sheet at Q2 '21, which we forecast to build to ~$337bn by the end of 2026. In addition, we have uniformly applied the remaining ~$22bn of Facebook's stock buyback authorization over the next 13 quarters. Beyond that, we make no assumptions in our financial modeling around additional buybacks in a way that would impact our forecasts. However, we recognize the potential for shareholder returns to compound above our current estimates in the coming years given that a) the landscape for large scale M&A remains uncertain in the current regulatory environment; and b) Facebook management is already aggressively investing for the long term. Below we provide an analysis of potential for shareholder returns and earnings (per share) impacts in the next 5 years - assuming the company uses ~42% of its free cash flow generated to repurchase shares (the average since 2017), we estimate Facebook has the potential to repurchase ~13% of its current market cap from free cash flow generated through 2026. This would represent material upside to shareholder returns vs. our current estimates.

Exhibit 135: Facebook Potential Share Buyback Analysis

mm, except per share data

	2017	2018	2019	2020	1H21	
Free Cash Flow	$ 17,484	$ 15,359	$ 20,659	$ 23,029	$ 16,330	
Total Share Repurchases	$ 1,976	$ 12,879	$ 4,201	$ 6,272	$ 11,018	**Average:**
% of FCF	*11%*	*84%*	*20%*	*27%*	*67%*	*42%*

	2H21E	2022E	2023E	2024E	2025E	2026E
Free Cash Flow	$ 16,611	$ 41,715	$ 51,312	$ 63,456	$ 75,545	$ 86,094
% of FCF Used for Repurchases	*42%*	*42%*	*42%*	*42%*	*42%*	*42%*
Total Potential Share Repurchases	$ 6,983	$ 17,537	$ 21,571	$ 26,676	$ 31,759	$ 36,193
Stock Price*	$ 382	$ 409	$ 438	$ 468	$ 501	$ 536
Potential Shares Repurchased	18	43	49	57	63	68
GSe Share Repurchases	$ 3,600	$ 7,200	$ 7,200	$ 4,411	$ -	$ -
Total Potential Share Repurchases	$ 6,983	$ 17,537	$ 21,571	$ 26,676	$ 31,759	$ 36,193
% upside vs. GS ests	*94%*	*144%*	*200%*	*505%*	*n/a*	*n/a*
GSe Avg Diluted Shares	2,865	2,871	2,882	2,899	2,930	2,966
GSe Avg Shares Repurchased	11	21	19	11	-	-
Potential Shares Repurchased	18	43	49	57	63	68
Potential Avg Diluted Shares	2,858	2,848	2,852	2,853	2,867	2,899
Implied GAAP EPS	$ 7.41	$ 16.09	$ 19.24	$ 22.64	$ 26.02	$ 29.28
% upside vs. GS ests	*0.2%*	*0.8%*	*1.1%*	*1.6%*	*2.2%*	*2.4%*
Implied PE	***n/a***	**23.7x**	**19.9x**	**16.9x**	**14.7x**	**13.1x**

Average Assumed Price	$ 456
Total Shares Repurchased (mm)	298
Total Potential Share Repurchases	$ 140,719
% of Current Market Cap	**12.8%**

*assumes average share price appreciation of 7% per year

Source: Company data, Goldman Sachs Global Investment Research

GS Estimates vs. Consensus

Exhibit 136: Facebook GS Estimates vs. Consensus

mm, except per share data

	Q3 2021			2021			2022		
	GS Est	Cons Est	% GS vs. Cons	GS Est	Cons Est	% GS vs. Cons	GS Est	Cons Est	% GS vs. Cons
DAUs (Total)	1,946	1,931	0.8%	1,972	1,947	1.3%	2,086	2,046	2.0%
US & Canada DAUs	196	196	0.2%	196	196	0.2%	198	198	0.2%
Europe DAUs	310	309	0.2%	314	312	0.6%	320	319	0.6%
Asia DAUs	803	795	1.0%	818	804	1.7%	880	857	2.7%
Rest of World DAUs	637	630	1.2%	643	638	0.8%	688	680	1.2%
Advertising (Total)	$ 28,940	$ 28,819	0.4%	$ 116,814	$ 116,570	0.2%	$ 140,370	$ 139,237	0.8%
US & Canada	$ 13,634	$ 13,290	2.6%	$ 54,927	$ 53,948	1.8%	$ 64,765	$ 62,820	3.1%
Europe	$ 6,972	$ 7,032	-0.9%	$ 29,040	$ 28,802	0.8%	$ 34,577	$ 34,373	0.6%
Asia	$ 5,386	$ 5,459	-1.3%	$ 21,300	$ 21,192	0.5%	$ 26,712	$ 26,206	1.9%
Rest of World	$ 2,948	$ 2,917	1.1%	$ 11,547	$ 11,469	0.7%	$ 14,316	$ 14,397	-0.6%
Payments & Other	$ 349	$ 473	-26.3%	$ 2,604	$ 2,621	-0.6%	$ 2,762	$ 3,142	-12.1%
Total Revenues	$ 29,289	$ 29,495	-0.7%	$ 119,418	$ 119,489	-0.1%	$ 143,132	$ 142,852	0.2%
GAAP EBITDA	$ 13,384	$ 12,900	3.8%	$ 57,615	$ 56,717	1.6%	$ 65,924	$ 66,631	-1.1%
GAAP EPS	$ 3.26	$ 3.18	2.6%	$ 14.30	$ 14.15	1.1%	$ 15.97	$ 16.10	-0.8%

Source: Company data, Goldman Sachs Global Investment Research, FactSet

Valuation & Risk/Reward Framework

Referencing our valuation framework, we apply the two-pronged approach for more mature companies (~20% or lower growth in the forward 2-3 years) to our Facebook price target. Our $455, 12-m price target is based on an equal blend of: (1) EV/GAAP EBITDA applied to our 2023 estimates and; (2) a modified DCF using an EV/FCF-SBC multiple applied to our 2026 estimates discounted back 3 years. Specifically:

- 16x EV/GAAP EBITDA (or 0.9x EV/EBITDA-to-growth) applied to our 2023 estimates. Our 16x multiple is slightly below the 2-year average mature digital ad platform peer group (incl. GOOGL, FB & TWTR) multiple of ~17x.

- 23x EV/FCF-SBC multiple applied to our 2026 estimates discounted back 3 years at 12%. The discount rate represents CAPM using the blended average of companies within our coverage universe consisting of: (1) 3% risk free rate (based on the normalized 10-year rate); (2) average beta of ~1.3; (3) equity risk premium of 7%.

Exhibit 137: Facebook Price Target Analysis
$mm, except per share data

Scenario Analysis	Downside	Base	Upside
Valuation	$ 253	$ 455	$ 587
% upside/downside	*-34%*	*19%*	*54%*
Sales (FY22E)	$ 131,682	$ 143,132	$ 154,583
Downside/Upside Adjustment	*-8%*	*-*	*8%*
Sales (FY23E)	$ 153,860	$ 170,956	$ 188,051
Downside/Upside Adjustment	*-10%*	*-*	*10%*
EV / 2023 Sales (Implied)	4.1x	7.0x	8.4x
Sales CAGR ('21-'23)	13.5%	19.6%	25.5%
EV / Sales to Growth (Implied)	0.30x	0.36x	0.33x
GAAP EBITDA (FY22E)	$ 52,673	$ 65,924	$ 72,654
EBITDA Margin %	40.0%	46.1%	47.0%
GAAP EBITDA (FY23E)	$ 61,544	$ 79,258	$ 90,265
EBITDA Margin %	40.0%	46.4%	48.0%
EV / 2023 EBITDA	10.0x	16.0x	18.0x
EBITDA CAGR ('21-23)	3.4%	17.3%	25.2%
EV / EBITDA to Growth	2.98x	0.93x	0.72x
Enterprise Value	$ 615,441	$ 1,268,125	$ 1,624,763
FCF-SBC (FY26E)	$ 60,179	$ 69,600	$ 73,262
FCF % of Sales	23.0%	26.6%	28.0%
EV / 2026 FCF-SBC	16.0x	23.0x	28.0x
FCF-SBC CAGR ('23-26)	15.5%	21.2%	23.3%
EV / FCF-SBC-to-Growth	1.03x	1.08x	1.20x
Discount Rate	15.0%	12.0%	10.0%
Discount Period (Years)	3	3	3
Enterprise Value (2025)	$ 962,871	$ 1,600,807	$ 2,051,335
Discounted Enterprise Value (2022)	$ 633,104	$ 1,139,423	$ 1,541,198
Weightings			
EV derived from GAAP EBITDA	50%	50%	50%
EV derived from (FCF-SBC)	50%	50%	50%
Enterprise Value	$ 624,272	$ 1,203,774	$ 1,582,981
Capital Structure Adjustments			
Adjusted Net Debt - 2022E	$ (103,333)	$ (103,333)	$ (103,333)
Adjusted Shares Outstanding	2,871	2,871	2,871

Source: Company data, Goldman Sachs Global Investment Research

In addition to our base case PT, we arrive at an upside/downside valuation scenario analysis by stress testing our base case operating estimates (revenue, EBITDA & FCF) and applying a range of higher/lower multiples. Our applied upside/downside multiples on GAAP EBITDA and FCF-SBC (discounted back) results in an upside/downside skew of ~1.6:1 from current levels.

Key Downside Risks

Risks to our Buy rating include:

- Competition for user growth, user engagement & advertising dollars across an array of incumbent and emerging Internet, media and commerce companies;
- Large investments in long-tailed initiatives depress operating margins for longer than our forecasts;
- No/low levels of incremental shareholder returns going forward;
- Regulatory scrutiny and industry practices altering the business model's prospects;
- Potential antitrust scrutiny could prove to be a headwind to M&A aspiration (to add talent and product innovation inorganically) and/or results in a break-up or dis-synergies of prior period M&A activity; &
- Inability to monetize upside optionality opportunities (messaging layer, social

commerce/shopping, Oculus/Metaverse)

In addition, Facebook is exposed to the volatility caused by the global macroeconomic environment & investor risk appetite for growth stocks.

Company Description

Facebook is a global conglomerate of several platforms, which include: a) Facebook – a social networking site (both mobile & desktop) where users can engage with a number of features such as the News Feed, Stories, Groups, Shops, Marketplace, News and Watch; b) Instagram – a media sharing platform where users can upload both photos and videos (including livestreaming) for audiences to view, private message each other and shop; c) Facebook Messenger – a global messaging app (both mobile & desktop) offers features such as chat, video and rooms; d) WhatsApp – a global, end-to-end encrypted messaging app that connects users as well as facilitates other actions such as B2C messaging, payments, etc; & e) Facebook Reality Labs – Facebook's AR/VR segment which offers both hardware (Oculus, Portal, etc) software & content. In 2020, Facebook reported total revenues of ~$86bn, comprising ~97% advertising and ~3% payments and other, and a total average revenue per user of $32.47. As of 1Q21, Facebook had ~2.85bn global MAUs, including 259mm in US & Canada, 423mm in Europe, 1.23bn in APAC & 940mm in Rest of World.

Snap (SNAP, Buy, $90 PT): Platform Evolution Driving Growth & Margin Narratives

Investment View

We are initiating coverage on Snap (SNAP) with a Buy rating and a 12-m price target of $90. We see Snap as one of the fastest growing companies in our coverage universe as they capitalize on past investments and a forward mindset on platform/product innovation to capture a mixture of user growth and monetization over our 5-year forecast period. Snap is at the forefront (and an emerging industry leader) with respect to the rise of augmented reality – a key secular theme that we see as one of the computing shifts likely to be central to the sector's transition to Web 3.0.

In this initiation, we frame the Snap investment case around three key debates: **1) Can Snap achieve its target of 50%+ revenue growth over the next 3 years?** Our view – Increasingly likely. We forecast Snap's revenues to grow at a ~48% '21-'23 CAGR (compared to the company's goal of 50%) and are above consensus revenue estimates. We increasingly see upward pressure on Snap's revenue trajectory based on its global user growth, platform revolution and product evolution; **2) Can Snap scale its margin structure in the coming years?** Our view – Yes. We have Snap GAAP EBITDA margins scaling from (13)% in 2021 to 40% in 2026, thereby producing one of the highest compounding operating profit growth rates in our coverage universe; & **3) Will platform and product innovation continue to drive industry-leading growth rates in the coming years?** Our view – Yes. As discussed above, we see Snap producing industry-leading growth rates on a compounded basis in the coming years, driven by a mix of recent investments as well as an ambitious product roadmap and monetization ramp against forward initiatives in the years ahead.

We see SNAP generating a '21-'26 revenue CAGR of ~41% (driven by a mixture of user growth, ad price inflation, and product innovation in its core advertising business) and a 2026 GAAP EBITDA margin of 40% (compared to (13)% in 2021) as the company scales its revenue base on its fixed cost base while also remaining focused on investing against key long-term growth initiatives. While Snap has been an outperformer YTD (+53% vs SPX +20%), we look at the potential for 50%+ compounded year-over-year revenue growth in the next few years and ascribe a premium EV/Sales multiple (which still looks compelling on a multiple to growth basis compared to the rest of the coverage universe). Two key short-term debates will be: a) the degree to which Apple's ATT/data privacy changes impact industry growth rates (including Snap); and b) the shape/velocity of the digital advertising recovery (which appears to be benefiting from a new elevated level of marketing activity on the back of the broader digitization of the global economy post-COVID).

GS Internet Investing Framework

Snap screens positively as we apply the key themes and tenets of our Goldman Sachs Internet Investing Framework, including: a) a large and growing TAM; b) product innovation; c) gaining market share in its end market; d) an inflationary pricing dynamic; e) management team focused on investments to drive innovation; & f) a rising margin structure. Negatives include: a) a control shareholder structure that screens poorly from an ESG perspective; & b) regulatory scrutiny (data collection/privacy, content moderation, etc.) facing the broader digital ad industry in the coming years. All of our industry analysis & idiosyncratic fundamental work supports our thesis for the long-term.

Exhibit 138: Ten Factor Investment Framework - Snap (SNAP)

GS Ten Factor Investment Framework – Snap (SNAP)

Factor	Assessment
Growth & Market Share	
1) TAM & Revenue Growth	• GSe global (ex-China) digital ad spend will grow at a ~18% '21-'26 CAGR to reach ~$862bn by 2026 (incl. a US CAGR of ~16% to ~$431bn), driven by a steady increase in penetration of total advertising services spend • We est. SNAP ad revs to grow at a ~41% '21-26 CAGR, driven by a mix of user growth, ad price inflation & product innovation in its core advertising business
2) Market Share Within Industry Sector	• Increasing market share within digital advertising & industry-leading revenue growth • Well positioned for new secular growth drivers (social commerce, AR/VR, etc.)
Unit Economics & Margins	
3) Unit Economics	• Significant margin expansion as monetization improvements, steady ad price inflation & continued efficiencies on infrastructure costs on a per-user basis drive gross margin expansion over the long-term • GSe EBIT margins expanding an avg of ~1,100bps/year (from ~(16)% in 2021 to ~39% in 2026).
Optionality & Capital Returns	
4) Optionality & Innovation	• Long-term investments in support of scaling user base (int'l, new product innovation) and increasing monetization (growing advertiser base/depth of auction, lower-funnel bidding optimization, new ad formats, etc.)
5) Capital Deployment & ROI	• Less focused on optimizing short-to-medium-term margins & continuing to balance scaling topline & ROIs on prior investments with continuing to invest behind longer-term opptys • No current outlook for shareholder returns (e.g. no buyback authorization)
Outside Factors	
6) Regulation	• Increased regulatory scrutiny industry-wide over the past few years across several key areas (data privacy, antitrust/market share, content moderation, etc.) • Data privacy remains key industry theme (esp. impact of Apple's ATT changes to broader industry growth)
7) ESG	• Carbon neutral as of 2021 and committed to purchase 100% of renewable energy at facilities globally • Majority voting control for Founder/CEO; board controls significant voting majority
Estimates & Market Dynamics	
8) Stock Trading Dynamics	• SNAP +237% over the past 12 months vs. SPX +32% • Current RSI of 58 (vs. coverage universe of 56)
9) GS Estimates vs. Street	• ~100bps & ~200bps above Street on '21 & '22 total revenues (respectively) • ~60bps & ~280bps below Street on '21 & '22 Gross Margin (respectively) • ~40bps below & ~230bps above Street on '21 & '22 Operating Margin (respectively)

10) Current Valuation vs. Historical Trends	• Over the past 3 years, SNAP has traded at an
	  • EV/Sales range of 7x to 18x
	  • EV/Sales-to-Growth range of 0.2x to 0.4x

Source: Company data, Goldman Sachs Global Investment Research

Three Key Debates & Our View

Key Debate #1: Can Snap achieve its target of 50%+ revenue growth over the next 3

years?

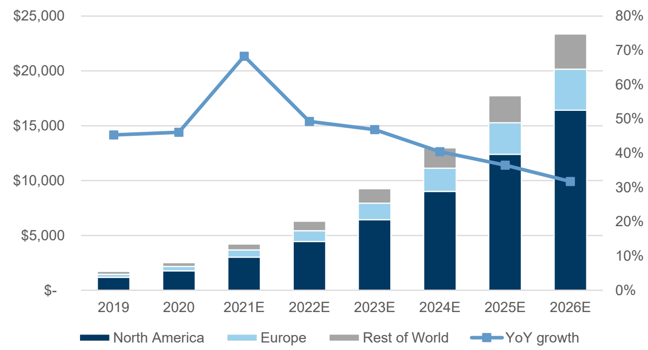
Our view - Increasingly likely. While we have modeled a ’20-’23 revenue CAGR of ~48% (compared to the company’s goal of 50%), we are above the Street estimates on revenue and increasingly believe there is an upward pressure on the revenue trajectory for Snap based on its global user growth, platform revolution and product evolution.

Snap is an emerging growth leader in terms of digital advertising – the company has exposure to the ~$862bn 2026 TAM for global (ex-China) digital advertising, of which we estimate it currently has a low-single-digit percentage market share. We see Snap as a market share gainer within the digital advertising industry – we forecast Snap will grow from ~1% share of total global (ex-China) digital advertising spend in 2021 to ~2.5% in 2026. In addition, the overall digital advertising industry is still taking share of secular shifts of offline advertising dollars moving online (especially ad supported media consumption and commerce initiatives). As a result of this dynamic, we see Snap producing revenue growth well above global GDP growth during our 5-year forecasting period.

The recovery of digital advertising (now trending well above the levels of pre-COVID) is emblematic of the capture of additional use cases and budgets/business planning of more industry verticals. Within digital advertising broadly, we see the shift from brand advertising to direct response (DR) advertising and a platform’s exposure to DR advertising as being critical to expanding advertiser scale and creating a more robust digital advertising auction dynamic. Snap has perhaps been the largest incremental beneficiary of this shift to DR – its tech investments over the past several years (pre-COVID) and enhancements to its ad product offering with features such as lower-funnel optimization goals (including goal-based bidding, which drove 49% of Snap customer leads in Q2’21) and pixel purchase optimization allowed the company to diversify its revenues and advertiser base and be more DR-focused.

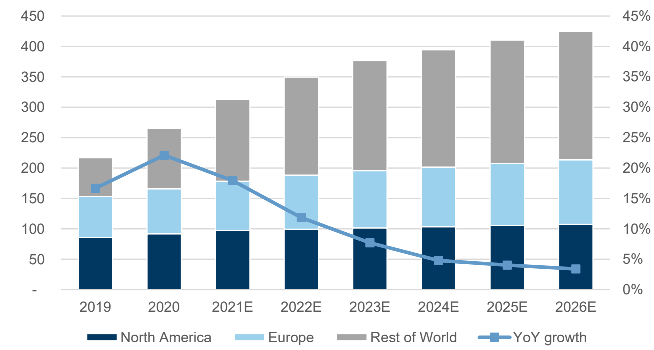
Snap has undergone a platform transformation in the past few years (which is still in progress) from being primarily a camera-focused messaging utility to a more diversified computing platform with aspects of social media, media consumption, shopping, and augmented reality. Given the scale of its platform, we see a mix of user growth, relatively stable time per user and ad pricing inflation as the biggest drivers of our ~41% ’21-’26 revenue growth CAGR. During its February 2021 Investor Day, management laid out their strategy for user/engagement growth, driven by continued improvement in its international platform offering (Android operating improvements, localized content, etc.) and increasing scale of newer products such as Discover, Maps, and Spotlight. On a platform monetization basis, Snap still lags Facebook and Twitter in terms of ad revenues per user (Snap’s total ad revenue per DAU was $3.35 in Q2’21 vs. Facebook $14.98 & Twitter $5.11). In addition, Snap provides advertisers with access to a key user demographic (13-34 year olds) that is increasingly difficult for advertisers to capture, while also delivering rising ROIs (a consistent theme of industry conversations in the last 12-18 months). One key investor debate with regard to users that has persisted (& likely will not abate in the near future) is around Snap’s user base potentially being capped by the nature of its core demographic, as its unclear whether the platform has been able to “age up” these users in the past.

Exhibit 139: Snap Total Revenues, by Region
$mm, '19-'26



Source: Company data, Goldman Sachs Global Investment Research

Exhibit 140: Snap Daily Active Users, by Region
mm, '19-'26



Source: Company data, Goldman Sachs Global Investment Research

Key Debate #2: Can Snap scale its margin structure in the coming years?

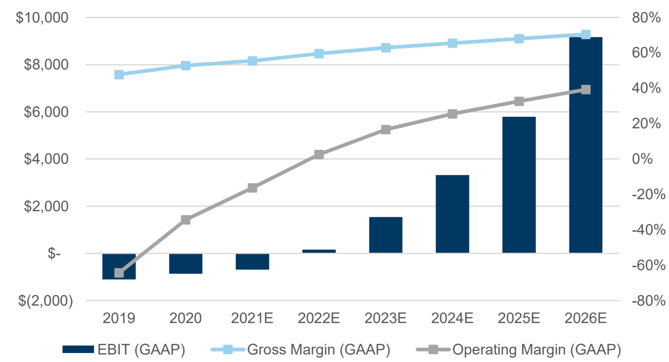
Our view - Yes. We have Snap GAAP EBITDA margins scaling from (13)% in 2021 to 40% in 2026, thereby producing one of the highest compounding operating profit growth rates in our coverage universe.

A main driver of margin leverage in our forward forecasts remains Snap improving monetization on a per-user basis over the next 5 years. One unique aspect of Snap's business model is that its cloud computing and data consumption costs are captured in cost of goods sold (as opposed to some players utilizing owned and operating infrastructure). This creates a high degree of gross margin leverage as revenue per user increases against a relatively stagnant infrastructure cost per user (with engagement levels already elevated). As a result, we expect incremental compounded revenue growth (~$19bn '26 over '21) to drive sizable gross profit dollar growth (from ~$2.3bn in 2021 to ~$16.5bn in 2026). Due to Snap's relatively fixed cost structure, this incremental gross profit growth will also drive a high degree of operating income & free cash flow conversion.

Despite producing rising incremental margins in the recent past, we see Snap among a group of companies in our coverage universe most intent on maintaining high levels of investments to drive innovation and capture long-term growth opportunities (including products/features such as Maps, Spotlight, Games, Shopping, etc). In particular, Snap's recent multi-quarter investments in launching its new Spotlight feature through funding content creators (which is causing near-term gross margin volatility) is an example of Snap broadening its use cases and adopting a more platform-based approach.

Key investments over the past few years (e.g., rebuild of its ad tech stack, rollout of a global self-service ad model, etc.) are now producing a mixture of compounded revenue growth and the potential for margin expansion as such investments are scaled in the coming years. Looking forward, we expect management to maintain key investments in the product roadmap (as highlighted above) and growing its headcount (both in R&D and advertising sales force to compete with larger digital advertising peers) with an aim toward international user growth & monetization ramp.

Exhibit 141: Snap GAAP Gross Margin & Operating Income
$mm, '19-'26



Source: Company data, Goldman Sachs Global Investment Research

Key Debate #3: Will platform and product innovation continue to drive industry-leading growth rates for Snap in the coming years?

Our view - Yes. As discussed above, we see Snap producing industry-leading growth rates on a compounded basis in the coming years, driven by a mix of recent investments as well as an ambitious product roadmap and monetization ramp against forward initiatives in the years ahead.

In our view, Snap is one of the industry's emerging leaders in augmented reality – the company has disclosed that over 200mm users engage with AR on the platform daily and that over 200k creators are actively building Lenses using its Lens Studio. In terms of the product roadmap and monetization path going forward, such initiatives as Maps (250mm+ MAUs), Spotlight (DAUs +49% QoQ in Q2'21), and Games are all avenues where Snap is shifting from a single-use utility to a more platform-based approach by driving greater degrees of computing utility in the hands of its users and layering in additional monetization opportunities as they connect a mixture of businesses/advertisers with their scaling user base. In particular, Spotlight is an example where management is balancing near term investments (in attracting content creators) to drive long-term user engagement and loyalty; a core competency of Snap as evidenced by a similar playbook with its Stories product several years prior. Other more direct-response oriented products (including shopping and Maps) should continue to diversify Snap's advertising base, driving greater auction density and pricing inflation over the long term.

GS Estimates vs. Consensus

Exhibit 142: Snap GS Estimates vs. Consensus
mm, except per share data

	Q3 2021			2021			2022		
	GS Est	Cons Est	% GS vs. Cons	GS Est	Cons Est	% GS vs. Cons	GS Est	Cons Est	% GS vs. Cons
DAUs (Total)	303	301	1%	313	307	2%	350	347	1%
NA DAUs	97	96	1%	98	97	1%	100	101	-2%
Europe DAUs	79	79	0%	81	80	1%	89	87	3%
ROW DAUs	127	127	0%	134	131	3%	161	161	0%
Revenues (Total)	$ 1,094	$ 1,094	0%	$ 4,219	$ 4,195	1%	$ 6,298	$ 6,200	2%
NA Revenues	$ 799	$ 790	1%	$ 3,021	$ 3,022	0%	$ 4,433	$ 4,421	0%
Europe Revenues	$ 164	$ 162	1%	$ 649	$ 633	3%	$ 992	$ 937	6%
ROW Revenues	$ 132	$ 139	-6%	$ 549	$ 549	0%	$ 873	$ 882	-1%
GAAP EBITDA	$ (129)	$ (128)	-1%	$ (562)	$ (573)	2%	$ 294	$ 91	222%
Adj. EBITDA	$ 139	$ 137	2%	$ 546	$ 544	0%	$ 1,383	$ 1,350	2%
GAAP EPS	$ (0.09)	$ (0.10)	12%	$ (0.37)	$ (0.38)	5%	$ 0.16	$ 0.03	510%
Adj. EPS	$ 0.09	$ 0.07	23%	$ 0.36	$ 0.35	2%	$ 0.83	$ 0.80	3%

Source: Company data, Goldman Sachs Global Investment Research

Valuation & Risk/Reward Framework

Referencing our broader valuation framework, we apply the two-pronged approach for growth companies (~20%+ revenue growth in the forward 2-3 years) to our SNAP price target. Our $90 price target is based on an equal blend of (1) EV/Sales applied to our 2023 estimates and (2) a modified DCF using an EV/GAAP EBITDA multiple applied to our 2026 estimates discounted back 3 years. Specifically:

- 15.0x EV/Sales (or 0.31x EV/Sales-to-growth) applied to our 2023 estimates. Our ~0.3x multiple-to-growth represents the 3-year average "growth digital ad platform" peer group (incl. SNAP & PINS).
- 25.0x EV/GAAP EBITDA multiple applied to our 2026 estimates discounted back 3 years at 12%. The discount rate represents CAPM using the blended average of companies within our coverage universe consisting of: (1) 3% risk free rate (based on the normalized 10-year rate); (2) average beta of ~1.3; (3) equity risk premium of 7%.

Exhibit 143: Snap Price Target Analysis

$mm, except per share data

Scenario Analysis	Downside	Base	Upside
Valuation	$ 47	$ 90	$ 126
% upside/downside	*-39%*	*18%*	*65%*
Sales (FY22E)	$ 5,668	$ 6,298	$ 6,928
Downside/Upside Adjustment	*-10%*	-	*10%*
Sales (FY23E)	$ 8,141	$ 9,251	$ 10,361
Downside/Upside Adjustment	*-12%*	-	*12%*
EV / 2022 Sales	11.0x	15.0x	18.0x
Sales CAGR ('21-23)	38.9%	48.1%	56.7%
EV / Sales to Growth	0.28x	0.31x	0.32x
Enterprise Value	$ 89,546	$ 138,759	$ 186,492
GAAP EBITDA (FY26E)	$ 7,008	$ 9,327	$ 9,344
EBITDA Margin %	30.0%	39.9%	40.0%
EV / 2026 EBITDA	15.0x	25.0x	35.0x
EBITDA CAGR ('23-26)	61.5%	77.6%	77.7%
EV / EBITDA-to-Growth	0.2x	0.3x	0.5x
Discount Rate	15.0%	12.0%	10.0%
Discount Period (Years)	3	3	3
Enterprise Value (2025)	$ 105,123	$ 233,172	$ 327,050
Discounted Enterprise Value (2022)	$ 69,120	$ 165,967	$ 245,718
Weightings			
EV derived from Sales	50%	50%	50%
EV derived from GAAP EBITDA	50%	50%	50%
Enterprise Value	$ 79,333	$ 152,363	$ 216,105
Capital Structure Adjustments			
Adjusted Net Debt - 2022E	$ (2,660)	$ (2,660)	$ (2,660)
Adjusted Shares Outstanding	1,732	1,732	1,732

Source: Company data, Goldman Sachs Global Investment Research

In addition to our base case PT, we arrive at an upside/downside valuation scenario analysis by stress testing our base case operating estimates (revenue & EBITDA) and applying a range of higher/lower multiples. Our applied upside/downside multiples on Sales and GAAP EBITDA (discounted back) results in an upside/downside skew of ~1.7:1 from current levels.

Key Downside Risks

Risks to our Buy rating include:

- Competition for user growth, user engagement & advertising dollars across an array of incumbent and emerging Internet, media and commerce companies;
- Failure to capitalize on global user growth opportunity (especially among Android users in emerging markets);
- Margin pressure from a mixture of platform and content initiatives worse than our modeling;
- Increased regulatory scrutiny of all media/eCommerce platforms with respect to user data/privacy; and
- Failure to execute/capitalize on monetization of growth initiatives (Maps, Games, Minis, AR initiatives with Camera).

In addition, Snap is exposed to the volatility caused by the global macroeconomic environment & investor risk appetite for growth stocks.

Company Description

Snap Inc. is a global social, digital media & camera platform with a number of products/features that offer a wide range of communication, entertainment & AR/VR utilities. Snapchat had 293mn Daily Active Users (DAUs) in 2Q21, with 32% in North

America, 27% in Europe, and 41% in the rest of the world. Snap's core platform, Snapchat, is comprised of several products including Communications, Stories, Discover, Snap Map, Spotlight, and Snap Games. The company continues to be at the forefront of AR/VR innovation within the industry, with key products such as Lenses and Virtual Try-On. Snap has ~293mm global DAUs (as of Q2 2021) and generated ~$2.5bn of total revenues in 2020 (comprised of ~71% from North America, ~16% from Europe & ~13% from Rest of World).

Pinterest (PINS, Neutral, $57 PT): Lapping The Pandemic Impact; Investing For The Long Term

Investment View

We are initiating coverage of Pinterest (PINS) with a Neutral rating and a price target of $57. Pinterest is a unique platform that has elements of social media, eCommerce, and content creation/consumption that differentiate its use cases. In our view, Pinterest is in a multiple year cycle of driving new use cases for consumers and advertisers and beginning to ramp its International monetization opportunity. Over the short term, a key debate will be the pace/cadence of user growth/engagement as Pinterest laps the positive impact from stay-at-home behavior in 2020. Over the medium/long term, we see the key debate as management's success in morphing the platform to capture more eCommerce/lower-funnel behavior and positioning the platform for success within the creator economy. Our Neutral rating is a reflection of more evenly balanced risk/reward skew from current levels (even with the recent ~18% decline in Pinterest shares post its Q2 '21 earnings report).

In this initiation, we frame the PINS investment case around three key debates: **1) Will Pinterest compound revenue growth at 25%+ per annum over our forecast period?** Our view – Likely. We see Pinterest producing a ~26% '21-'26 revenue CAGR driven by a mixture of solid MAU growth and capitalizing on monetization (advertiser depth, auction pricing, commerce, creator economy, and international); **2) Can Pinterest achieve a 30s%+ Adj EBITDA margin long term?** Our View – Yes. While Pinterest has remained focused on long-term investments (tech stack, product innovation, platform evolution, etc.), we think that recent margin improvement (on revenue recovery from COVID-19 lows) demonstrates the underlying operating leverage potential in Pinterest's business model; and **3) How successful will Pinterest be in its efforts to capture growth from eCommerce/shopping and the creator economy?** Our view – Work in Progress. Pinterest continues to build out its eCommerce/shopping offering (a pivot started in 2019) to position the platform to benefit as the lines between traditional advertising and eCommerce business models continue to blur. Additionally, as highlighted in its recent Q2 '21 earnings call, management has begun efforts to capture more content creation (& monetization) from the creator economy.

We see Pinterest generating a '21-'26 revenue CAGR of ~26% (driven by a mix of ~9% MAU growth and ~17% revenue per MAU growth) and a 2026 GAAP EBITDA margin of ~33% (compared to ~(6)% in 2020). Pinterest has been an underperformer YTD ((15)% vs SPX +20%) on the back of a negative market reaction following its Q2 '21 earnings report. At current levels, our Neutral rating reflects a relatively evenly balanced risk/reward skew and the fact that Pinterest already trades at very healthy valuation multiples (both absolute and relative to growth). In the short term, we expect that user growth/engagement trajectory and any updates on progress of product evolution will likely be the key drivers of stock performance.

GS Internet Investing Framework

Pinterest screens with mixed results as we apply the key themes and tenets of our Goldman Sachs Internet Investing Framework, including: a) a large and growing TAM; b) gaining market share in its end market; c) product innovation; and d) a rising margin structure in the coming years. Negatives include: a) significant (albeit not majority) voting control held by founder/CEO; b) a lack of industry leadership position at this juncture; c) need to pivot its consumer and advertiser offerings to generate increased engagement/monetization (which comes with execution risks); d) regulatory scrutiny (data collection, privacy, content moderation) facing the broader digital ad industry in the coming years; and e) our operating estimates broadly below consensus estimates. All of our industry analysis & idiosyncratic fundamental work supports our thesis for the long term.

Exhibit 144: Ten Factor Investment Framework - Pinterest

GS Ten Factor Investment Framework – Pinterest (PINS)

Growth & Market Share	
1) TAM & Revenue Growth	• GSe global (ex-China) digital ad spend will grow at a ~18% '21-'26 CAGR to reach ~$862bn by 2026 (incl. a US CAGR of ~16% to ~$431bn), driven by a steady increase in penetration of total advertising services spend • We est. PINS ad revs to grow at a ~26% '21-26 CAGR, driven by a mix of user growth, ad price inflation & product innovation in its core advertising business
2) Market Share Within Industry Sector	• Increasing market share within digital advertising industry • Undergoing platform shift to capture long-term secular growth drivers (social commerce, creator economy, etc)
Unit Economics & Margins	
3) Unit Economics	• Significant operating margin expansion over long-term driven by monetization improvements, steady ad price inflation & continued efficiencies on infrastructure costs against a relatively fixed expense base • GSe EBIT margins expanding an avg of ~400bps/year (from ~12% in 2021 to ~32% in 2026).
Optionality & Capital Returns	
4) Optionality & Innovation	• Long-term investments in support of scaling user base (int'l, new product innovation) and increasing monetization (growing advertiser base/depth of auction, shopping & other lower-funnel ad formats, creator economy, etc)
5) Capital Deployment & ROI	• Less focused on optimizing short-to-medium-term margins & continuing to balance scaling topline & ROIs on prior investments with continuing to invest behind longer-term opptys • No current outlook for shareholder returns (e.g. no buyback authorization)
Outside Factors	
6) Regulation	• Increased regulatory scrutiny industry-wide over the past few years across several key areas (data privacy, antitrust/market share, content moderation, etc.) • Data privacy remains key industry theme (esp. impact of Apple's ATT changes to broader industry growth)
7) ESG	• Commitment to hiring historically under-represented groups (e.g. ~50% of global employees are female) • Founder/CEO has significant voting control (albeit not majority voting control unlike several other companies under our coverage) and is Chairman of the Board of Directors
Estimates & Market Dynamics	
8) Stock Trading Dynamics	• PINS +62% over the past 12 months vs. SPX +32% • Current RSI of 39 (vs. coverage universe of 56)
9) GS Estimates vs. Street	• Roughly inline & ~500bps below Street on '21 & '22 total revenues (respectively • ~40bps & ~90bps above Street on '21 & '22 Gross Margin (respectively) • ~20bps & ~400bps below Street on '21 & '22 Operating Margin (respectively)

10) Current Valuation vs. Historical Trends	• Since its IPO, PINS has traded at an
	  • EV/Sales range of 8x to 16x
	  • EV/Sales-to-Growth range of 0.2x to 0.4x

Source: Company data, Goldman Sachs Global Investment Research

Three Key Debates & Our View

Key Debate #1: Will Pinterest compound revenue growth at 25%+ per annum over our forecast period?

Our view - Likely. We see Pinterest producing a ~26% '21-'26 revenue CAGR driven by a mixture of solid MAU growth and capitalizing on monetization (advertiser depth, auction pricing, commerce, creator economy & international).

Pinterest is an emerging growth leader in terms of digital advertising – the company has exposure to the ~$862bn 2026 TAM for global (ex-China) digital advertising, of which we estimate it currently has a low-single-digit percentage market share. Pinterest is a unique property among the digital advertising names – its platform is not exactly defined as a typical social media/daily mobile computing utility, but rather its users/engagement are more driven by a mixture of personalized projects, creativity, and expression. The company is increasingly focusing on harnessing all of those elements as reflections of intent and bottom of the purchase funnel monetization opportunities.

Pinterest has a large base of users that still remain largely un-monetized compared to peers – on overall revenue per user, Pinterest still lags its SMID-cap peers (SNAP & TWTR) and, more notably, more established platforms such as Facebook. Further, Pinterest has a significant monetization gap between its US and international user base – revenue per MAU in Q2 '21 was $5.42 in the US vs. only ~$0.37 for international. The company has taken a more deliberate approach to monetization (which it has, so far, been able to quickly and successfully scale its advertising revenue in the US in recent quarters) and plans to further invest in international monetization in the coming years (through localized content, international sales force, self-serve, etc.)

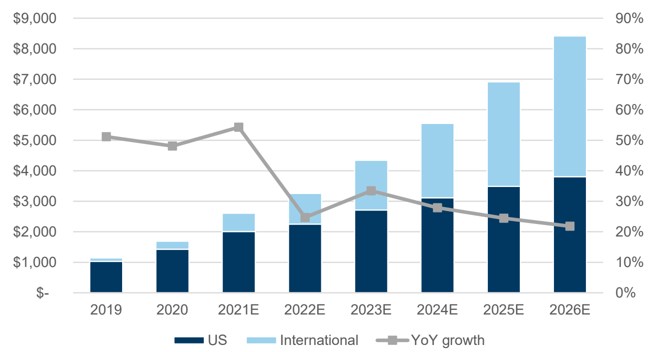
The recovery of digital advertising (now trending well above pre-COVID levels) is emblematic of the capture of additional use cases and budgets/business planning of more industry verticals. Within digital advertising broadly, we see the shift from brand advertising to direct response (DR) advertising and a platform's exposure to DR advertising as being critical to expanding advertiser scale and creating a more robust auction dynamic. Through its mix of ad tech investments/optimizations, product innovation and scaling an international go-to-market strategy, Pinterest is beginning to capitalize on these broader industry shifts toward direct response.

Pinterest is seeing a rising ad price dynamic in its monetization efforts (an output of years of investments behind automation and measurement/attribution) as advertiser density continues to scale and improved relevance of ads is driving higher advertiser ROI. Pinterest's advertiser base has historically tilted more toward retail/CPG, but this has been evolving over the past 12+ months (with the platform focused on expanding its verticals e.g. financials, travel, etc.). In addition, Pinterest benefited from the positive shift in the eCommerce penetration curve driven by consumer behavior changes during COVID-19.

In its Q2 '21 earnings report, Pinterest saw both a slowdown in user growth and a decline in engagement as stay-at-home orders eased globally. In total, this appears to be both an unwind of the engagement benefits that Pinterest saw during COVID-19 (which peaked in mid-2020) and a potential initial impact on personalization from Apple's recent privacy changes. Over the long term, however, management's goals around user growth, scale and, as an output, monetization opportunities remain unchanged. In contrast to the user performance, Q2 '21 saw continued momentum in terms of monetization as advertisers within a variety of industry verticals (retail, beauty, travel, etc.) returned to strength vs. the COVID-19 driven pullback during Q2 '20.

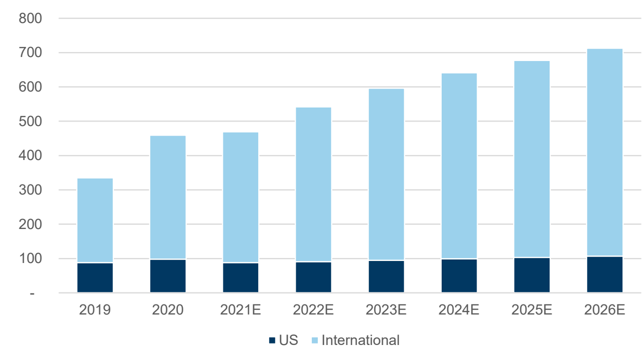
In addition, we see Pinterest as a modest market share gainer within the digital advertising industry. In addition, the overall digital advertising industry is still taking share of secular shifts of offline advertising dollars moving online (especially ad supported media consumption and commerce initiatives). As a result of this dynamic, we see Pinterest producing revenue growth well above global GDP growth during our 5-year forecasting period.

Exhibit 145: Pinterest Total Revenues, by Region
$mm, '19-'26



Source: Company data, Goldman Sachs Global Investment Research

Exhibit 146: Pinterest Total MAUs, by Region
mm, '19-'26



Source: Company data, Goldman Sachs Global Investment Research

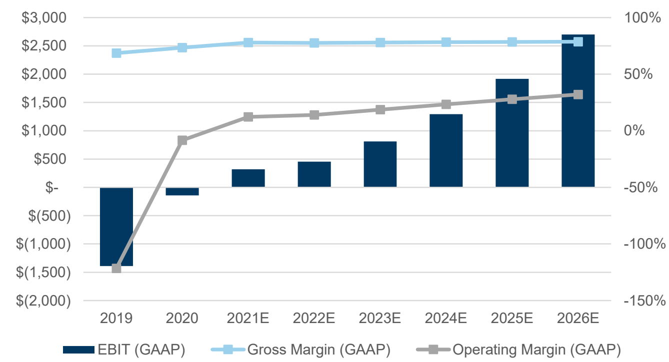
Key Debate #2: Can Pinterest achieve a 30s%+ Adj EBITDA margin long term?

Our view - Yes. While Pinterest has remained focused on long term investments (tech stack, product innovation, platform evolution, etc.), we think that recent margin improvement (on revenue recovery from COVID-19 lows) demonstrates the underlying operating leverage potential in Pinterest's business model. We forecast Pinterest GAAP EBITDA margins scaling from ~(6)% in 2020 to ~33% in 2026, reflecting one of the highest compounding operating profit growth rates in our coverage universe, and model 2026 Adj. EBITDA margins of ~40% (vs. management's initial reference point of 30%+ long-term Adj EBITDA margins).

A main driver of operating leverage in our forward forecasts remains Pinterest achieving compounded advertising revenue per MAU of ~17% over the next 5 years. We expect this incremental compounded revenue growth (~$5.8bn '26 over '21) coupled with continued optimization on cloud infrastructure costs (as monetization improvement scales against already-elevated engagement levels) to drive sizable gross profit dollar growth (from ~$2bn in 2021 to ~$6.6bn in 2026) – the benefits of a digital advertising platform with nearly 80% reported gross profit margins and on which ad price inflation (driven by advertiser auction depth) can be a healthy tailwind for long term margins.

In our view, Pinterest management remains focused on investments against long-term growth rather than optimizing for short-/medium-term margin outcomes – these investments center around overall user growth (with its brand marketing campaign set to return in Q4 '21), international user monetization, commerce initiatives, the creator economy, and better advertising tools via its tech stack. In particular, when compared to some of its scaled mega cap digital advertising peers, we expect Pinterest will need to remain at a high level of investment cadence in capacity and product innovation for our 5-year financial forecast period. That being said, Pinterest has demonstrated solid margin expansion over the past 12 months driven in party by revenue outperformance and new economics from its AWS cloud computing infrastructure deal.

Exhibit 147: Pinterest GAAP Gross Profit & Operating Income
$mm, '19-'26



Source: Company data, Goldman Sachs Global Investment Research

Key Debate #3: How successful will Pinterest be in its efforts to capture growth from eCommerce/shopping and the creator economy?

Our view - Work in Progress. Pinterest continues to build out its eCommerce/shopping offering (a pivot started in 2019) to position the platform to benefit as the lines between traditional advertising and eCommerce business models continue to blur. Additionally, as highlighted in its recent Q2 '21 earnings call, management has begun efforts to capture more content creation (& monetization) from the creator economy.

Pinterest remains in the early innings of a shift down-funnel to capture more shopping/commerce consumer behavior, which began in 2019 and remains a key focus area for management. Pinterest recently highlighted that shopping behavior by users seems more resilient than overall platform engagement and that the company is optimistic about the tools that have been built/deployed to monetize the opportunity longer term. Over the medium-term, Pinterest will need to maintain this momentum by continuing to ramp its advertiser/merchant supply and capitalizing on shifts in consumer behavior in favor of shopping activity.

With the company's most recent earnings call, we also see Pinterest embracing the potential opportunity from the rise of the creator economy. Such initiatives include a) Idea Pins (promoting creators to share ideas); b) creator code (positive environment for creators and consumers); and c) product tagging (to help with creator monetization). In order to foster an environment for creators, Pinterest management has highlighted a willingness to invest some of its most valuable ad inventory toward the promotion of Idea Pins and other creator-focused products (at the expense of maximizing near-term ad revenues). Pinterest management has emphasized their view that, over the long term, fostering the creator economy will be engagement accretive with a long tail of monetization opportunities. A key long-term debate for the stock will likely be the level of growth and margin expansion that is produced from aligning the platform along these two key secular growth themes: a) the blurring of the lines between advertising/eCommerce and b) the rise of the creator economy.

GS Estimates vs. Consensus

Exhibit 148: Pinterest - GS Estimates vs. Consensus
mm, except per share data

	Q3 2021			2021			2022		
	GS Est	Cons Est	% GS vs. Cons	GS Est	Cons Est	% GS vs. Cons	GS Est	Cons Est	% GS vs. Cons
MAUs	460	466	-1.2%	469	475	-1.2%	542	505	7.3%
US MAUs	89	92	-2.8%	88	92	-3.8%	91	94	-2.7%
Int'l MAUs	371	375	-1.0%	381	382	-0.3%	451	409	10.3%
Ad Revenues (Total)	$ 620	$ 632	-1.8%	$ 2,611	$ 2,617	-0.2%	$ 3,256	$ 3,436	-5.3%
US Ad Revenues	$ 482	$ 487	-0.9%	$ 2,011	$ 1,992	0.9%	$ 2,255	$ 2,316	-2.7%
Int'l Ad Revenues	$ 138	$ 142	-2.9%	$ 600	$ 583	2.9%	$ 1,001	$ 865	15.7%
GAAP EBITDA	$ 79	$ 43	83.9%	$ 353	$ 327	7.9%	$ 495	$ 571	-13.4%
Adj. EBITDA	$ 155	$ 161	-4.3%	$ 726	$ 745	-2.5%	$ 885	$ 1,044	-15.3%
GAAP EPS	$ 0.10	$ 0.08	22.2%	$ 0.44	$ 0.47	-4.5%	$ 0.62	$ 0.83	-24.6%
Adj. EPS	$ 0.21	$ 0.22	-4.6%	$ 0.98	$ 1.05	-6.5%	$ 1.18	$ 1.32	-10.4%

Source: Company data, Goldman Sachs Global Investment Research

Valuation & Risk/Reward Framework

Referencing our broader valuation framework, we apply the two-pronged approach for growth companies (~20%+ revenue growth in the forward 2-3 years) to our PINS price target. Our $57, 12-month price target is based on an equal blend of: (1) EV/Sales applied to our 2023 estimates and; (2) a modified DCF using an EV/GAAP EBITDA multiple applied to our 2026 estimates discounted back 3 years. Specifically:

- 8.0x EV/Sales (or 0.28x EV/Sales-to-growth) applied to our 2023 estimates. Our ~0.3x multiple-to-growth represents the 3-year average "growth digital ad platform" peer group (incl. SNAP & PINS).
- 20.0x EV/GAAP EBITDA multiple applied to our 2026 estimates discounted back 3 years at 12%. The discount rate represents CAPM using the blended average of companies within our coverage universe consisting of: (1) 3% risk free rate (based on the normalized 10-year rate); (2) average beta of ~1.3; (3) equity risk premium of 7%.

Exhibit 149: Pinterest Price Target Analysis
$mm, except per share data

Scenario Analysis	Downside	Base	Upside
Valuation	$ 35	$ 57	$ 84
% upside/downside	*-37%*	*2%*	*51%*
Sales (FY22E)	$ 2,930	$ 3,256	$ 3,581
Downside/Upside Adjustment	*-10%*	-	*10%*
Sales (FY23E)	$ 3,822	$ 4,344	$ 4,865
Downside/Upside Adjustment	*-12%*	-	*12%*
EV / 2023 Sales	5.0x	8.0x	10.0x
Sales CAGR ('21-'23)	21.0%	29.0%	36.5%
EV / Sales to Growth	0.24x	0.28x	0.27x
Enterprise Value	$ 19,112	$ 34,749	$ 48,649
GAAP EBITDA (FY26E)	$ 2,525	$ 2,750	$ 2,946
EBITDA Margin %	30.0%	32.7%	35.0%
EV / 2026 EBITDA	14.0x	20.0x	28.0x
EBITDA CAGR ('23-26)	43.6%	47.7%	51.1%
EV / EBITDA-to-Growth	0.32x	0.42x	0.55x
Discount Rate	15.0%	12.0%	10.0%
Discount Period (Years)	3	3	3
Enterprise Value (2025)	$ 35,356	$ 54,991	$ 82,497
Discounted Enterprise Value (2022)	$ 23,247	$ 39,141	$ 61,981
Weightings			
EV derived from Sales	50%	50%	50%
EV derived from GAAP EBITDA	50%	50%	50%
Enterprise Value	$ 21,180	$ 36,945	$ 55,315
Capital Structure Adjustments			
Adjusted Net Debt - 2022E	$ (3,201)	$ (3,201)	$ (3,201)
Shares Outstanding - 2022E	699	699	699

Source: Company data, Goldman Sachs Global Investment Research, FactSet

Key Risks

What would make us more or less constructive?

- User growth deviates from current modeling assumptions – to the positive, expansion into new cohorts and rise in engagement on back of shopping & creator economy initiatives;
- Different international revenue trajectory on the back of go to market investments and ad product innovation;
- Impact of COVID-19 (re-opening vs additional stay at home orders) in terms of engagement trends;
- Execution against the social commerce opportunity, including shifting user behavior more toward lower-funnel activities and/or proving out monetization/attribution to advertisers;
- Competition for "blurring of the lines" presented by social commerce offerings; and
- Increased regulatory scrutiny of all media/eCommerce platforms with respect to user data/privacy.

In addition, Pinterest is exposed to the volatility caused by the global macroeconomic environment & investor risk appetite for growth stocks.

Company Description

Pinterest is a global inspiration and discovery platform that provides visual & actionable recommendations based on a user's personal interests, curated through data within the company's first-party data assets. As both a utility and media platform, Pinterest creates the ability to both Search based on a users' commercial intent and enjoy a wide variety of interest-based content, which fosters a unique, shopping-oriented environment on the platform. As of Q2 2021, Pinterest has 454mm monthly active users, ~80% of which are outside of the US. The company exclusively generates revenue through advertising – ad units primarily take the form of Pins with a variety of formats/features including Catalog/shoppable, video, carousel, etc. In 2020, total revenues for Pinterest were ~$1.7bn, ~84% of which was generated in the US.

Twitter (TWTR, Sell, $60 PT): Ad Recovery Priced In; "Show Me Story" On Innovation

Investment View

We are initiating coverage on Twitter (TWTR) with a Sell rating and a price target of $60, which implies ~8% downside vs ~10% average upside for the rest of our coverage. Rather than the usual categorization of Twitter as a social media platform, we view the company as more of a differentiated media/publishing platform, with the "town square", personalized news/interest aggregation and communication layers being the key characteristics that are gaining momentum and offer a unique proposition for its core users. That being said, we see the main debate for Twitter being whether the company can either: a) morph its core use case to appeal to a wider, more scaled audience base; and/or b) execute against more niche monetization opportunities (e.g., creator monetization, etc.) that align with the platform's current distribution. Our Sell rating is a reflection of a more negative risk/reward skew on shares at current levels and the fact that our 5 year forecasts are broadly below current consensus estimates.

In this initiation, we frame the Twitter investment case around three key debates: **1) Will Twitter compound revenue growth at 20%+ per annum over our forecast period?** Our view – No. Our current fundamental analysis (based on industry data and ad industry conversations) points toward Twitter falling short of its 2023 user and revenue goals laid out at its February 2021 Analyst Day; **2) Can Twitter achieve a ~mid-teens GAAP EBIT margin over the long term?** Our view – Yes. Twitter management laid out a goal of "mid-teens" GAAP EBIT margin long term, and we forecast Twitter to reach ~14-16% EBIT margins by 2025/26. However, when applied to single-digit industry market share we see earnings power at Twitter capped by its investments; & **3) Will Twitter morph its mix of consumer and advertising products to drive different forms of monetization and engagement?** Our view – Work in Progress. Historically, Twitter has been slower to iterate and innovate than some of its peers (based on management's own public statements). However, more recently, we have seen a pace/cadence to product development that could point to improvement in the coming years. Successfully tapping into streams of engagement and monetization could drive revenues and margin structure to be better than our modeling and is a key risk to our rating.

We see Twitter generating a '21-'26 revenue CAGR of ~17% (driven predominantly a mix of ~10% mDAU growth and ~7% revenue per mDAU growth) and a 2026 GAAP EBITDA margin of 30% (compared to 14% in 2020). Where could we be wrong? a) If Twitter exceeds our forecasting for either user growth or engagement; b) if Twitter successfully pivots their ad product offering to morph their ad budget mix toward more direct response advertisers (causing a deepening of its base of advertisers & an auction depth that drives rising ad prices); & c) Twitter successfully capitalizes on its "town square" forum in terms of layering additional monetization and engagement tools for content creators.

Twitter has been an outperformer over the past 12 months (+63% TTM vs SPX +32%). In examining its valuation we see Twitter as either a growth stock (where investors typically focus less on valuation and multiples are applied further up the P&L) or a not yet a mature GARPy-type stock. In addition, given Twitter's need to make heavy opex/capex investments, we see its GAAP EBIT margin structure (and, as an output, its earnings power) as capped relative to peers. Utilizing a normalized multiple to growth approach for Twitter on 2023E GAAP EBITDA yields a negative risk/reward skew from current trading levels (upside/downside of 1:1.5) - this compares to the rest of our coverage universe where we see a blended average upside of ~10% and an upside/downside skew of ~1.5 to 1. In the short term, we expect that user growth/engagement trajectory and any perceptions about product evolution will likely be the key drivers of stock performance.

GS Internet Investing Framework

Twitter screens with mixed results as we apply the key themes and tenets of our Goldman Sachs Internet Investing Framework. Positives include: a) a large and growing TAM; b) product innovation; & c) a rising margin structure in the coming years. Negatives include: a) a lack of industry leadership position; b) need to pivot its consumer and advertiser offerings to generate increased engagement/monetization (which comes with execution risks); c) regulatory scrutiny (data collection, privacy, content moderation, etc.); d) our operating estimates below consensus; & e) strong stock performance in the past 6-12 months. All of our industry analysis & idiosyncratic fundamental work supports our thesis for the long term.

Exhibit 150: Ten Factor Investment Framework - Twitter (TWTR)

GS Ten Factor Investment Framework – Twitter (TWTR)

Growth & Market Share	1) TAM & Revenue Growth	• GSe global (ex-China) digital ad spend will grow at a ~18% '21-'26 CAGR to reach ~$862bn by 2026 (incl. a US CAGR of ~16% to ~$431bn), driven by a steady increase in penetration of total advertising services spend • We est. TWTR ad revs to grow at a ~18% '21-26 CAGR, driven by a mix of ~10% mDAU growth and ~7% revenue per mDAU growth
Growth & Market Share	2) Market Share Within Industry Sector	• Market share gainer growing above-industry off a lower base of absolute revenue dollars vs. mega cap peers • Key debate remains Twitter's ability to capture secular shifts in consumption/ad budget (video, direct-response, AR, messaging, shopping, etc.) vs. competitors
Unit Economics & Margins	3) Unit Economics	• Gross margins ~stable & operating margins improving as mgmt. continues investments in data center infrastructure, ad tech stack & product innovation. Key margin variables include: a) ad price inflation/deflation; b) yield/return on platform investments; c) scale of users & monetization; & d) depth of advertisers (incl. DR) • GSe EBIT margins expanding an avg of ~250bps/year (from ~1% in 2020 to ~16% in 2026).
Optionality & Capital Returns	4) Optionality & Innovation	• Accelerated pace of product rollouts/innovation (with probability of success still unknown) • Key investment areas include new user products (Lists, Topics, Interests), creator monetization (Spaces, Newsletters, Tip Jar, Ticketed Spaces, Super Follows), direct-response (incl. MAP) & video ad monetization
Optionality & Capital Returns	5) Capital Deployment & ROI	• Mgmt balancing mix of strategic M&A, product development and shareholder returns • Current remaining buyback authorization of ~$1.3bn
Outside Factors	6) Regulation	• Increased regulatory scrutiny over the past few years across several key areas (data privacy, content moderation, etc.) • Data privacy remains key industry theme (Apple's ATT poses potential headwind for TWTR)
Outside Factors	7) ESG	• Committed to 100% carbon neutral power sourcing at existing data centers by 2022; purchases offset projects to neutralize carbon footprint • Majority of board remembers (including Chairman) are independent
Estimates & Market Dynamics	8) Stock Trading Dynamics	• TWTR +63% over the past 12 months vs. SPX +32% • Current RSI of 50 (vs. coverage universe of 56) • Given these factors, we see our TWTR sell rating as a contrarian call against current investor positioning
Estimates & Market Dynamics	9) GS Estimates vs. Street	• Roughly inline & ~200bps below Street on '21 & '22 total revenues (respectively) • ~60bps & ~190bps below Street on '21 & '22 Gross Margin (respectively) • ~90bps above & ~90bps below Street on '21 & '22 Operating Margin (respectively)

Estimates & Market Dynamics	10) Current Valuation vs. Historical Trends	• Over the past 3 years, TWTR has traded at an
		  • EV/GAAP EBITDA range of 18x to 30x
		  • EV/EBITDA-to-Growth range of 0.3x to 0.6x

Source: Company data, Goldman Sachs Global Investment Research, FactSet

Three Key Debates & Our View

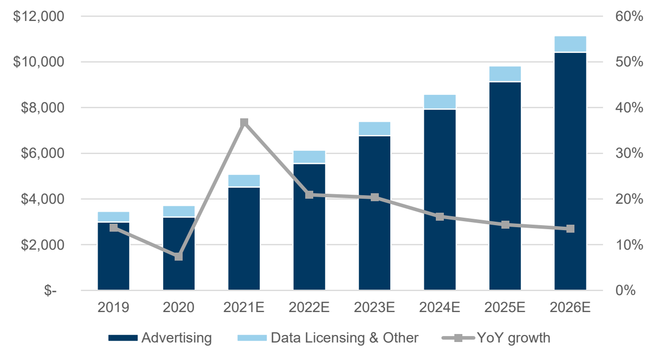
Key Debate #1: Will Twitter compound revenue growth at 20%+ per annum over our forecast period?

Our view - No. Twitter's core business has exposure to the ~$862bn 2026 TAM for global (ex-China) digital advertising, of which we estimate it currently has a low-single-digit percentage market share. At the end of Q2 '21, Twitter had 206mm monetizable daily active users, including US mDAUs of 37mm and international mDAUs of 169mm. Twitter stands at the low end of the industry spectrum in terms of direct response advertising as a percentage of mix (which we estimate at ~10-15%) and is still largely dependent on large company brand advertising campaigns to drive the bulk of its advertising revenue dollars. At its recent February 2021 Analyst Day, Twitter management gave goals to reach ~$7.5bn of total revenues, ~315mm total mDAUs, and a ~50/50 brand/direct response ad revenue mix by 2023. We see those goals as ambitious based on our ad industry conversations and financial modeling work and remain below those targets in our 2023 financial estimates (although we acknowledge that exceeding those targets would likely prove the "show me story" part of its stock narrative).

Twitter has benefited from the recovery of digital advertising since the COVID-19-led shock in March-May 2020. Twitter saw the largest rate of change decline in revenue vs their peers during that time period (in Q2 '20, ad revenue growth bottomed at -23% YoY) but ad budgets (especially brand budgets, which were easier for advertisers to cut quickly as COVID-19 impacted the macro environment) have largely since recovered. The recovery of digital advertising (now trending well above the levels of pre-COVID) is emblematic of the capture of additional use cases and budgets/business planning of more industry verticals. Within digital advertising broadly, we see the shift from brand advertising to direct response advertising and a platform's exposure to DR advertising as being critical to expanding advertiser scale and creating a more robust digital advertising auction dynamic. Like its industry peers, we see Twitter producing revenue growth well above global GDP growth during our 5-year forecasting period.

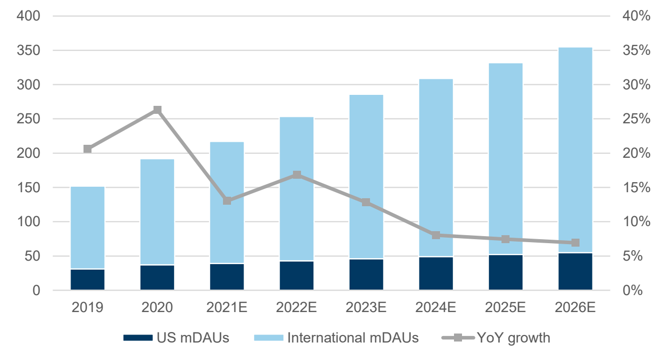
Twitter is a market share gainer within the broader digital advertising landscape as it continues to grow at above-industry rates (albeit off a lower base of absolute revenue dollars than some of its mega cap peers). In addition, the company is also taking share of secular shifts of offline advertising dollars moving online (especially ad-supported media consumption and commerce initiatives). Twitter is also benefiting from broader ad price inflation, driven by both a recovery from COVID-19 lows in Q2 '20 and a multi-year secular backdrop of ad price inflation as digital platforms deliver equal to or superior returns on advertising budgets vs many offline competitors. That being said, the competitive intensity for advertising/marketing budgets remains high as a host of companies move to orient their platforms around key shifts in consumption (video, AR, messaging, shopping) and as advertising products continue to improve measurement/attribution capabilities (even despite industry headwinds on data/privacy). Specifically to Twitter, the company stands to benefit in 2H '21 from the return of a strong events calendar (which began with the Olympics) and a series of product launches (many in technology) leading to brand advertisers utilizing Twitter as part of their broader advertising plans. Looking beyond 2021, a key driver of stock performance will be Twitter's ability to capture greater user intent and garner a greater percentage of direct advertising budgets (via direct response ad products, self-serve ad stack, etc.) to increase its depth of advertiser base (driving upward pressure on ad auction pricing dynamics).

Exhibit 151: Twitter Total Revenue, by Segment
$mm, '19-'26



Source: Company data, Goldman Sachs Global Investment Research

Exhibit 152: Twitter Total mDAUs, by Region
mm, '19-'26



Source: Company data, Goldman Sachs Global Investment Research

Conducting a "what's priced in?" analysis, we believe Twitter's current valuation implies a total '21-'26 revenue CAGR of ~20% (vs. our estimates of ~17%), leaving little margin of safety if growth and/or margins deviate from its current trend. Specifically, compounding Twitter's current EV at 12% annually for 4 years and applying an 18x EV/GAAP EBITDA multiple (at the high end of GOOGL/FB's historical multiples) implies a '26 GAAP EBITDA of ~$4.5bn. Assuming stock-based compensation is ~24% of GAAP EBITDA in 2026 (in line with our estimates) and applying a 45% Adj EBITDA margin (the high end of Twitter's long-term goal of ~40-45%) implies ~$12.6bn of total revenues in 2026 (or a ~20% '21-'26 revenue CAGR vs. GSe ~17%). Below we provide an illustrative scenario analysis flexing the assumed multiple and Adj EBITDA margin, which results in a range of '21-'26 revenue CAGRs from ~19-25%.

Exhibit 153: Scenario Analysis - 2026 Total Revenues Implied by TWTR Current Valuation

2026 Adj EBITDA Margin	Twitter '26 EV/GAAP EBITDA: 19.0x	18.5x	18.0x	17.5x	17.0x
45.0%	$ 12,112	$ 12,439	$ 12,785	$ 13,150	$ 13,537
43.8%	$ 12,458	$ 12,795	$ 13,150	$ 13,526	$ 13,924
42.5%	$ 12,824	$ 13,171	$ 13,537	$ 13,924	$ 14,333
41.3%	$ 13,213	$ 13,570	$ 13,947	$ 14,345	$ 14,767
40.0%	$ 13,626	$ 13,994	$ 14,383	$ 14,794	$ 15,229

Source: Company data, Goldman Sachs Global Investment Research, FactSet

Exhibit 154: Scenario Analysis - '21-'26 Total Revenue CAGR Implied by TWTR Current Valuation

2026 Adj EBITDA Margin	Twitter '26 EV/GAAP EBITDA: 19.0x	18.5x	18.0x	17.5x	17.0x
45.0%	19.0%	19.6%	20.3%	20.9%	21.6%
43.8%	19.6%	20.3%	20.9%	21.6%	22.3%
42.5%	20.3%	21.0%	21.6%	22.3%	23.0%
41.3%	21.1%	21.7%	22.4%	23.1%	23.8%
40.0%	21.8%	22.5%	23.1%	23.8%	24.5%

Source: Company data, Goldman Sachs Global Investment Research, FactSet

Exhibit 155: Twitter "What's Priced In?" - Implied '21-'26 Sales CAGR

Current EV	$	53,074
Discount Rate		12%
Discount Period		4
Implied 2025 EV	$	83,513
"Mature" EV/GAAP EBITDA		18.0x
Implied '26 GAAP EBITDA	$	4,640
SBC as % of GAAP EBITDA		24%
Implied '26 Adj EBITDA	$	5,753
Adj EBITDA Margin		45%
Implied '26 Sales	$	12,785
Implied '21-'26 Sales CAGR		**20.3%**
GSe '21-'26 Sales CAGR		**17.0%**

Source: Company data, Goldman Sachs Global Investment Research, FactSet

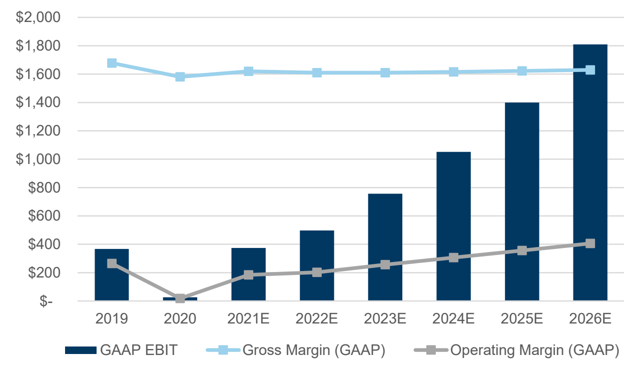
Key Debate #2: Can Twitter achieve a ~mid teens GAAP EBIT margin over the long term?

Our view - Yes. On a consolidated basis, we model Twitter with relatively stable gross margins and rising operating margins through our 5 year financial forecast period. After years of slow product iteration, Twitter has resumed investments in data center infrastructure, a rebuild of its ad tech stack and a greater degree of product innovation to capture consumer intent on the platform in an attempt to expand its monetization offering to more direct response advertisers. The key variables for operating margin leverage in coming years will be: a) ad price inflation or deflation; b) yield/return on platform investments; c) building scale of its users and monetization opportunities; & d) monetization of time spent with a greater depth of advertisers in its auction.

One interesting element of Twitter's financial model that differentiates it from its peers is its focus on running/operating its own data centers and tech infrastructure while other peers (Snap, Pinterest, etc.) have embraced cloud computing as a way to provide more financial flexibility with regard to operating their business (albeit with less tech platform control). As a result, in our view, Twitter has less operating and capital efficiency over the long term, putting a cap on its margin structure (especially when D&A and SBC costs are factored in).

To date, Twitter has been much more exposed to large brand advertising budgets and as a result has seen more volatility in its ad pricing dynamic in the past few years. In order to capture some of the more linear ad pricing inflation that the industry is experiencing, Twitter must pivot its ad product offerings to capture a greater degree of direct advertising budgets. Apple's iOS 14 privacy changes (part of a broader shift toward greater degrees of consumer control over privacy) are still being highlighted by Twitter management as a source of potential company/industry headwinds in 2H '21 (although, similar to its peers, it did not quantify the potential impact during its most recent earnings report). Our broader industry conversations continue to point to large scaled platforms with first-party data and aggregated scale being able to navigate these headwinds with modest (low to mid-single) headwinds to ad revenue growth.

Exhibit 156: Twitter GAAP Gross Margin & Operating Income
$mm, '19-'26



Source: Company data, Goldman Sachs Global Investment Research

Key Debate #3: Will Twitter morph its mix of consumer and advertising products to drive different forms of monetization and engagement?

Our view - Work in Progress. In terms of investments, we see Twitter management focused on an increased cadence of product rollouts and potential monetization shifts. After years of being behind the curve of produce development/deployment (which management has expressed publicly), Twitter has materially increased the pace/cadence of product iteration. However, the probability of success of these platform evolutions remains an open question. Such new products include those aimed at user growth/engagement (Lists, Topics, Interests) and/or creator engagement/monetization (Spaces, Newsletters, Tip Jar, Ticketed Spaces, Super Follows). On the use case front, narrowcasting (product launch like audio rooms Spaces) could allow for new engagement and monetization cases to emerge. In terms of video, Twitter management expressed the potential for a long runway for growth of monetizable video on the platform (including recently disclosing that more than 50% of videos on Twitter are < 15 seconds). Over the medium term, we see Twitter staying in investment mode in support of product launch cadence and platform innovation (management recently raised its 2021 total GAAP expense growth guide to "30% or more" YoY).

In recent earnings calls, Twitter CEO Jack Dorsey has discussed his interest in (& possible Twitter embrace of) elements of a decentralized web and/or bitcoin/blockchain as a means of long-term optionality for Twitter as a platform. It remains unclear to us how Twitter might capitalize on this opportunity – our view is focused on whether Twitter can drive more eCommerce-like behavior into its platform as one possible means of capitalizing on a decentralized web.

Twitter has ~$3bn of net cash on its balance sheet at Q2 '21, which we forecast to build to ~$10bn by the end of 2026. Twitter has ~$1.3bn remaining on an authorized stock buyback, which we expect to be uniformly executed over the next 16 quarters. Beyond that, we make no assumptions in our financial modeling around additional buybacks in a way that would impact our published forecasts. One area of upside optionality (and one that would likely cause the stock to outperform if executed successfully) could be how management deploys the existing cash balance (and future generated FCF) toward a mix of strategic M&A, product development and shareholder returns. Below we provide an analysis of potential for shareholder returns and earnings (per share) impacts in the next 5 years – assuming the company uses ~69% of its free cash flow generated to repurchase shares (the average since 2017), we estimate Twitter has the potential to repurchase ~9% of its current market cap from free cash flow generated through 2026. This would represent material upside to shareholder returns vs. our current estimates.

Exhibit 157: Twitter Potential Share Repurchase Analysis
mm, except per share data

	2017	2018	2019	2020	1H21	
Free Cash Flow	$ 673	$ 869	$ 769	$ 129	$ 317	
Total Share Repurchases	$ -	$ -	$ -	$ 245	$ 495	**Average:**
% of FCF	*0%*	*0%*	*0%*	*191%*	*156%*	*69%*

	2H21E	2022E	2023E	2024E	2025E	2026E
Free Cash Flow	$ 204	$ 801	$ 1,049	$ 1,393	$ 1,870	$ 2,244
% of FCF Used for Repurchases	*69%*	*69%*	*69%*	*69%*	*69%*	*69%*
Total Potential Share Repurchases	$ 141	$ 556	$ 728	$ 967	$ 1,298	$ 1,558
Stock Price*	$ 65	$ 70	$ 74	$ 80	$ 85	$ 91
Potential Shares Repurchased	2	8	10	12	15	17
GSe Share Repurchases	$ 160	$ 320	$ 320	$ 320	$ 139	$ -
Total Potential Share Repurchases	$ 141	$ 556	$ 728	$ 967	$ 1,298	$ 1,558
% upside vs. GS ests	*-12%*	*74%*	*128%*	*202%*	*834%*	*n/a*
GSe Avg Diluted Shares	875	878	883	888	895	903
GSe Avg Shares Repurchased	3	5	5	4	2	-
Potential Shares Repurchased	2	8	10	12	15	17
Potential Avg Diluted Shares	876	875	878	880	881	886
Implied GAAP EPS	$ 0.45	$ 0.78	$ 1.05	$ 1.34	$ 1.68	$ 2.06
% upside vs. GS ests	*-0.1%*	*0.4%*	*0.6%*	*0.9%*	*1.5%*	*1.9%*
Implied PE	***n/a***	**83.1x**	**61.9x**	**48.4x**	**38.6x**	**31.5x**

Average Assumed Price	$ 77
Total Shares Repurchased (mm)	64
Total Potential Share Repurchases	$ 5,248
% of Current Market Cap	**9.3%**

*assumes average share price appreciation of 7% per year

Source: Company data, Goldman Sachs Global Investment Research

GS Estimates vs. Consensus

Exhibit 158: Twitter - GS Estimates vs. Consensus
mm, except per share data

	Q3 2021			2021			2022		
	GS Est	Cons Est	% GS vs. Cons	GS Est	Cons Est	% GS vs. Cons	GS Est	Cons Est	% GS vs. Cons
mDAUs (Total)	212	211.7	0%	217	217.2	0%	253.5	256.7	-1%
US mDAUs	38	37.5	1%	39	38.5	1%	43	43.0	0%
Int'l mDAUs	174	173.8	0%	178	177.7	0%	210.5	211.6	-1%
Ad Revenues (Total)	$ 1,123	$ 1,137	-1%	$ 4,524	$ 4,499	1%	$ 5,553	$ 5,594	-1%
US Ad Revenues	$ 574	*n/a*	*n/a*	$ 2,383	*n/a*	*n/a*	$ 2,844	*n/a*	*n/a*
Int'l Ad Revenues	$ 549	*n/a*	*n/a*	$ 2,141	*n/a*	*n/a*	$ 2,708	*n/a*	*n/a*
Data Licensing & Other	$ 138	$ 139	-1%	$ 557	$ 555	0%	$ 591	$ 598	-1%
Total Revenues	$ 1,261	$ 1,282	-2%	$ 5,081	$ 5,084	0%	$ 6,143	$ 6,245	-2%
GAAP EBITDA	$ 143	$ 164	-13%	$ 937	$ 946	-1%	$ 1,260	$ 1,218	3%
Adj. EBITDA	$ 313	$ 316	-1%	$ 1,543	$ 1,494	3%	$ 1,908	$ 1,910	0%
GAAP EPS	$ 0.05	$ 0.01	535%	$ 0.60	$ 0.39	54%	$ 0.78	$ 0.51	52%
Adj. EPS	$ 0.23	$ 0.17	40%	$ 1.09	$ 0.89	22%	$ 1.41	$ 1.20	17%

Source: Company data, Goldman Sachs Global Investment Research, FactSet

Valuation & Risk/Reward Framework

Referencing our valuation framework, we apply the two-pronged approach for more mature companies (~20% or lower growth in the forward 2-3 years) to our Twitter price target. Our $60 price target is based on an equal blend of: (1) EV/GAAP EBITDA applied to our 2023 estimates and; (2) a modified DCF using an EV/FCF-SBC multiple applied to our 2026 estimates and discounted back 3 years. Specifically:

- 30x EV/GAAP EBITDA (or 0.81x EV/EBITDA-to-growth) applied to our 2023 estimates. Our 30x multiple represents the high end of Twitter's 2-year +/- 1 standard deviation range of ~17-30x.
- 43x EV/FCF-SBC multiple applied to our 2026 estimates discounted back 3 years at 12%. The discount rate represents CAPM using the blended average of companies within our coverage universe consisting of: (1) 3% risk free rate (based on the normalized 10-year rate); (2) average beta of ~1.3; (3) equity risk premium of 7%.

Exhibit 159: Twitter Price Target Analysis

$mm, except per share data

Scenario Analysis	**Downside**	**Base**	**Upside**
Valuation	$ 28	$ 60	$ 89
% upside/downside	*-57%*	*-8%*	*37%*
Sales (FY22E)	$ 5,652	$ 6,143	$ 6,635
Downside/Upside Adjustment	*-8%*	-	*8%*
Sales (FY23E)	$ 6,653	$ 7,392	$ 8,131
Downside/Upside Adjustment	*-10%*	-	*10%*
EV / 2023 Sales (Implied)	3.1x	6.6x	9.1x
Sales CAGR ('21-'23)	14.4%	20.6%	26.5%
EV / Sales to Growth (Implied)	0.21x	0.32x	0.34x
GAAP EBITDA (FY22E)	$ 1,074	$ 1,260	$ 1,459.68
EBITDA Margin %	*19%*	*20.5%*	*22%*
GAAP EBITDA (FY23E)	$ 1,264	$ 1,762	$ 2,033
EBITDA Margin %	*19%*	*23.8%*	*25%*
EV / 2023 EBITDA	18.0x	30.0x	40.0x
EBITDA CAGR ('21-23)	*16.2%*	*37.1%*	*47.3%*
EV / EBITDA to Growth	1.11x	0.81x	0.85x
Enterprise Value	$ 22,753	$ 52,869	$ 81,314
FCF-SBC (FY26E)	$ 1,115	$ 1,453	$ 1,784
FCF % of Sales	*10%*	*13.0%*	*16%*
EV / 2026 FCF-SBC	25.0x	43.0x	50.0x
FCF-SBC CAGR ('23-26)	46.0%	59.5%	70.8%
EV / FCF-SBC-to-Growth	0.54x	0.72x	0.71x
Discount Rate	15.0%	12.0%	10.0%
Discount Period (Years)	3	3	3
Enterprise Value (2025)	$ 27,868	$ 62,462	$ 89,178
Discounted Enterprise Value (2022)	$ 18,324	$ 44,460	$ 67,001
Weightings			
EV derived from GAAP EBITDA	50%	50%	50%
EV derived from (FCF-SBC)	50%	50%	50%
Enterprise Value	$ 20,538.50	$ 48,664	$ 74,158
Capital Structure Adjustments			
Adjusted Net Debt - 2022E	$ (3,929)	$ (3,929)	$ (3,929)
Adjusted Shares Outstanding	878	878	878

Source: Company data, Goldman Sachs Global Investment Research

In addition to our base case PT, we arrive at an upside/downside valuation scenario analysis by stress testing our base case operating estimates (revenue, EBITDA & FCF) and applying a range of higher/lower multiples. Our applied upside/downside multiples on GAAP EBITDA and FCF-SBC (discounted back) results in an upside/downside skew of 1:1.5 from current levels.

Key Risks

Risks to our Sell rating (which could cause the stock to outperform) include:

- Faster user growth and deeper time spent (engagement) than our current modeling;
- Successful innovation with user products (to drive new use cases & faster user growth) & advertising products (MAP, etc.) to deliver mix shift toward direct

response;

- Successful market share gains vs industry peers;
- Regulatory outcomes prove less worrisome for business model; &
- Equity value creation from deployment of capital.

That being said, Twitter is exposed to the volatility caused by the global macroeconomic environment & investor risk appetite for growth stocks.

What Could Make Us More Positive?

Key variables that could change our thesis and make us more positive on the stock include: a) if Twitter outperforms on user growth & engagement as product innovation (Spaces, Newsletters, Tip Jar, Ticketed Spaces, Super Follows, etc.) drives user adoption faster or to a greater degree than we expect; b) if Twitter's ad product innovation (most notably the platforms' shift to direct-response) outperforms our expectations and drives higher revenue growth/monetization vs. our forecasts; c) if Twitter is able to scale its fixed cost investments and produce better-than-expected margin expansion in the coming years (to be more inline with industry peers); and/or d) shareholder returns (primarily share buybacks) exceed our expectations or the company's current authorization in the coming years.

Company Description

Twitter is a leading online communication platform focused on public, real-time, conversational, and distributed content. Through Twitter, users engage in global conversations, advertisers reach an engaged, relevant, and highly mobile global audience through content-like advertising, and platform partners expand their reach and distribution. As of Q1 '21, Twitter reaches 199mm monetizable daily active users, 81% of which international, who tweet more than 500mm times per day. In 2020, Twitter to generated $3.7bn in revenue, of which 86% is advertising based.

Amazon (AMZN, Buy, $4,250 PT): Long Runway Ahead At A Compelling Growth Adjusted Risk/Reward

Investment View

We are initiating coverage of Amazon (AMZN) with a Buy rating and a price target of $4,250. We see AMZN as a core long-term holding for Internet investors as the company has exposure to multiple long-term runways - online shopping, cloud computing, digital advertising, streaming media, AI driven computing etc. - that can sustain 15%+ growth while also producing margin expansion in the coming years. On the back of the past 18 months and changed consumer/enterprise trends from COVID, we see Amazon as well positioned to maintain its leadership position in global eCommerce due to its compelling Prime membership offering and array of product selection (driven by both its 1st party and 3rd party supply approach), as well as fulfillment and logistics advantages that will be sustained by management focus and incremental investments. In addition, Amazon is the leader in public cloud computing with 25%+ operating margins, and should sustain a mix of 23% revenue growth and 25% EBIT growth over our forecasted 5 year horizon.

We frame our initiation of Amazon along the lines of three key debates: **1) Can Amazon sustain 15%+ topline growth even at this scale?** Yes, based on its large consumer and enterprise base of customers, and multiple business lines, we think Amazon has room to continue to penetrate the multiple large TAMs it operates in, including advertising; **2) Can Amazon manage investments and margin expansion in the coming years?** Yes, based on our fundamental work, we see Amazon's business mix shift acting as a tailwind to gross margin, even with heavy investments in cloud and fulfillment. We see gross profit dollar growth YoY as a tailwind for ~100 bps of operating margin expansion annually on average; **3) Will Amazon's investment strategy produce incremental opportunities in the years ahead?** Yes, we see Amazon committed to its core investment strategy and see opportunities ahead in key consumer categories (groceries, CPG, healthcare), International market expansion (especially as a driver of Prime adoption) as well as infrastructure and tech investments in support of cloud, hardware and AI.

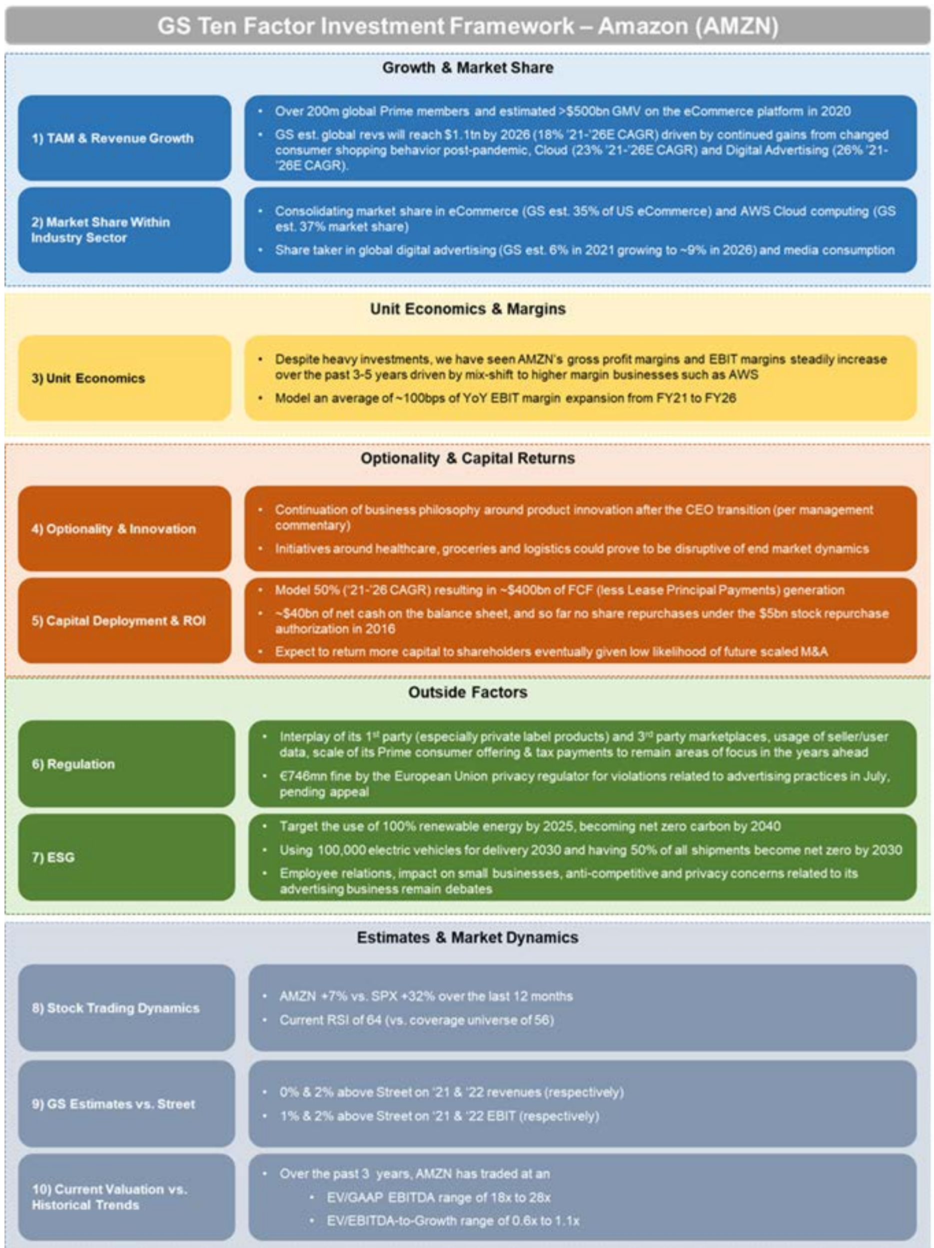
Even with a recent management change, with Andy Jassy now CEO and Jeff Bezos now executive chairman, we see no change in Amazon's long-term strategy: delight the customer, deliver best in class prices and service, and reinvest profits back into the most compelling growth opportunities across an array of the sub-sector end markets under our coverage universe. Lastly, with the performance of the stock since July 2020 (+5% vs SPX +36%), AMZN has grown into its forward valuation and can now be framed as a compelling risk/reward on both growth adjusted forward multiples on the consolidated level and as a sum of the parts.

GS Internet Investing Framework

Amazon screens positively as we apply the key themes and tenets of our Goldman

Sachs Internet Investing Framework, including a) exposure to multiple large and growing TAMs; b) product innovation; c) industry leadership; d) rising gross and operating margin profiles and e) ESG friendly initiatives. The company is well positioned to capitalize on multiple secular shifts in behavior and consumption – online shopping, cloud computing adoption, digital advertising, consumer subscriptions and streaming media consumption. Our industry and idiosyncratic fundamental work supports our long-term thesis.

Exhibit 160: Ten Factor Investment Framework - Amazon (AMZN)



Source: Company data, Goldman Sachs Global Investment Research

Three Key Debates & Our View

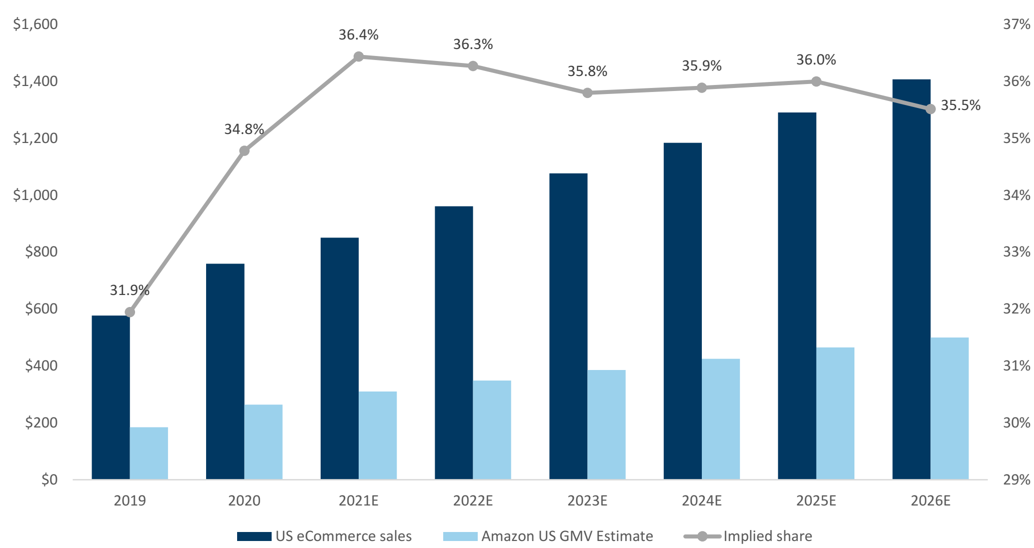
Key Debate #1: Can Amazon sustain 15%+ revenue growth from '21-'26 given its current

scale of revenue?

Our view – With over 200mm Prime subscribers and an estimated >$500bn of GMV on the eCommerce platform in 2020, Amazon is the largest (ex China) eCommerce company with solid industry leadership, and stands to benefit from changed consumer shopping behavior post-COVID. In two additional areas, cloud computing and digital advertising, Amazon has 35% and 6% market share, respectively, of the end market, and stands to be a meaningful player of the secular growth shifts in the year ahead. We expect Amazon will produce 18% revenue CAGR from '21-'26, well in excess of global GDP growth.

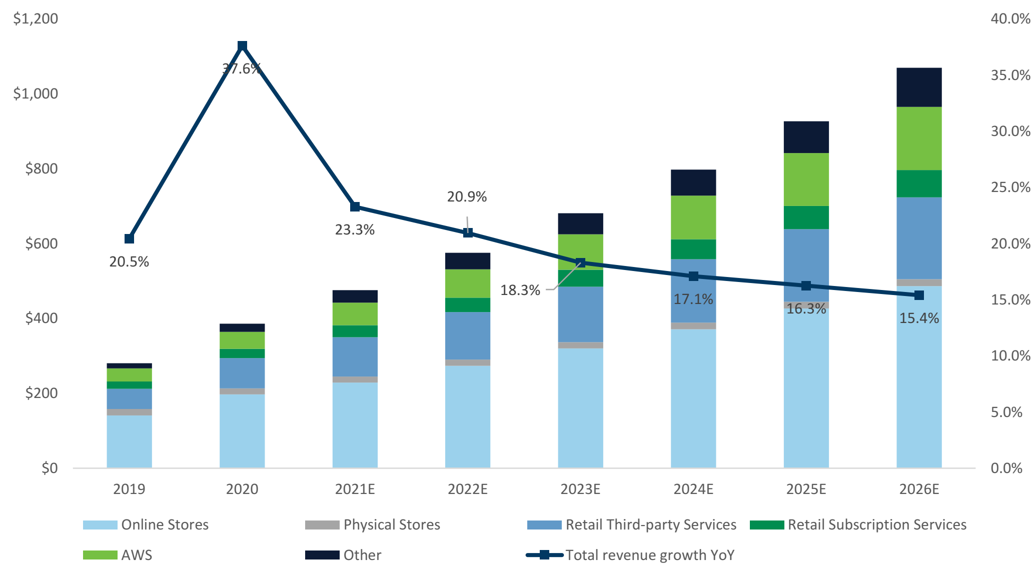
While Amazon's share of eCommerce in the US grew as a result of COVID, we see it consolidating its market share position in the years ahead given its scale. In particular, Amazon flagged a recent slowdown in Prime customer spending habits on its last earnings call. When coupled with tougher comps in a post-COVID world, we expect Amazon online retail growth will slow (it guided as such to Q3 '21) and mean revert to normalized trailing 1-2 year growth trends as they face tougher comps and grow below historical levels in the coming quarters. We still see many tailwinds to Amazon's eCommerce efforts: new and higher sustained levels of eCommerce penetration, large categories that remain under-penetrated, and a large and growing Prime membership base. We have a similar market share view for AWS cloud computing. In areas such as media consumption and digital advertising, Amazon is a share taker, and that effect is even more pronounced when compared to offline growth.

Exhibit 161: Amazon US eCommerce Market Share
$bn, '19-'26



Source: Company data, Goldman Sachs Global Investment Research, Census Bureau

Exhibit 162: Amazon Revenue by segment
$bn, '19-'26



Source: Company data, Goldman Sachs Global Investment Research

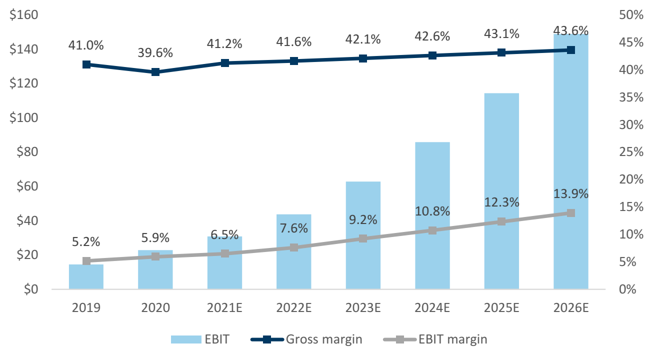
Key Debate #2: Can Amazon manage investments and margin expansion in the coming years?

Our view – Yes. Despite heavy investments, we have seen Amazon's gross profit margins and EBIT margins steadily increase over the past 3-5 years (Exhibit 163). We see this trend continuing during our 5 year forecast period, driven by mix shift to higher margin businesses. We see Amazon achieving continued margin expansion while staying focused on longer duration investments in employee count, fulfillment/logistics, media content and R&D. Amazon has already demonstrated its pricing power by raising the price of its Prime membership several times in the last 5 years (Exhibit 165). We see EBIT margins expanding from 5.9% in 2020 to 13.9% in 2026 – driving a 37% '21-'26 EBIT CAGR.

Similar to the rising margin dynamic discussed above, our forecast model shows Amazon generating a cumulative FCF less Lease Principal Payments from '21-'26 of $400bn. In addition, Amazon tapped the debt capital markets in the last 12 months (raised ~$18.5bn in May 2021) but now sits with ~$40bn of net cash on its balance sheet. While Amazon's board authorized a $5bn stock buyback in 2016, no shares have to date been repurchased under that authorization. With the pending acquisition of MGM film studio/library for $8.5bn (pending FTC review/approval), we don't expect Amazon to conduct large scaled M&A activities based on past precedent. Given the financial profile, we expect more capital to be returned to shareholders as Amazon matures.

Exhibit 163: Amazon Gross Margins (GAAP), EBIT (GAAP) and EBIT margins

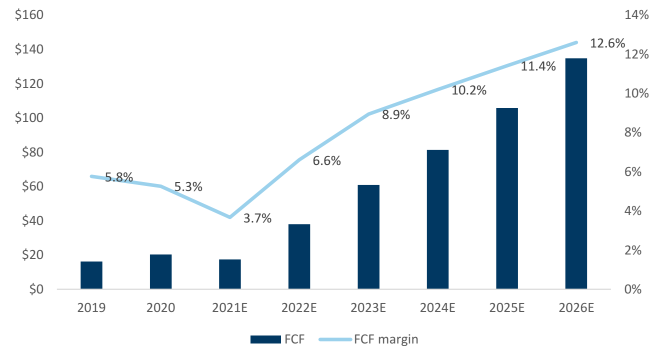
$bn and %, '19-'26



Source: Company data, Goldman Sachs Global Investment Research

Exhibit 164: Amazon Free Cash Flow less Lease Principal Payments (TTM)

$bn, '19-'26



Source: Company data, Goldman Sachs Global Investment Research

Exhibit 165: Prime price increases

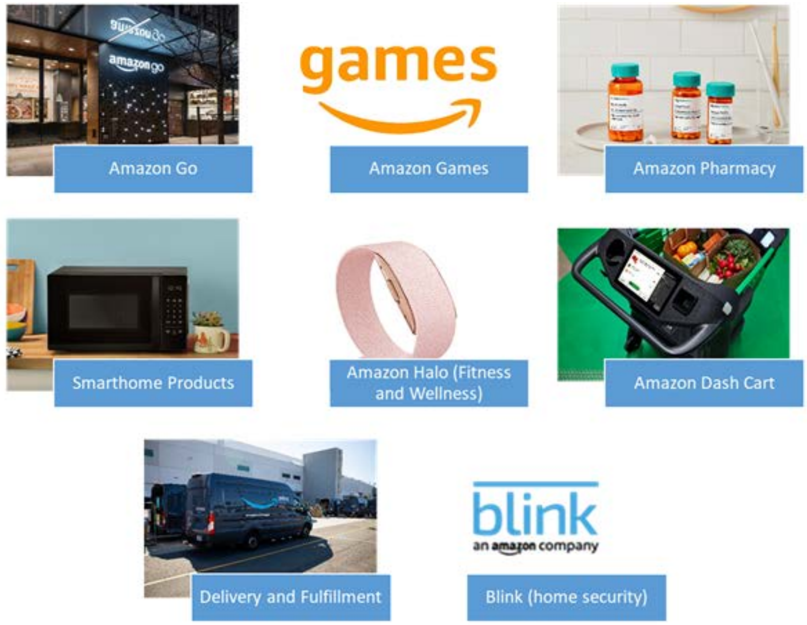
Event	Year	Price (Annual)	% increase	Price (Monthly)	% increase
Amazon Prime launch	2005	$79	n/a	n/a	n/a
Price Increase	2014	$99	25%	n/a	n/a
Monthly Plan launch	2016	n/a	n/a	$11	n/a
Price Increase	2018	$119	20%	$13	18%

Source: Data compiled by Goldman Sachs Global Investment Research

Key Debate #3: Will Amazon's investment philosophy produce incremental opportunities in the years ahead?

Our view – Yes, we see Amazon committed to its core investment philosophy, and we see opportunities ahead in key consumer categories (groceries, CPG, healthcare etc.), International market expansion (especially as a driver of Prime adoption) and infrastructure and tech investments in support of cloud, hardware and AI. Similar to other mega cap tech platforms under our coverage, we see Amazon management continuing along a path of product and platform innovation. With the transition of Jeff Bezos to executive Chairman and Andy Jassy to CEO on July 5th, investors are debating what such a transition could mean for the company's strategy and the stock. We are encouraged by the CFO's comments on the last earnings call that there is no change to the company's philosophy and focus. Additionally, Mr. Bezos remains Amazon's largest shareholder and in company statements has emphasized a personal focus on new products and innovation.

Exhibit 166: Examples of Amazon investments and emerging products



Source: Company website, Goldman Sachs Global Investment Research

GS Estimates vs. Consensus

In our modeling, we are tracking roughly inline with Street estimates on revenue, gross profit & EBIT over our 5 year forecast horizon ('21 to '26). We see room for upside in our modeling of Amazon's digital advertising, cloud computing and International eCommerce revenues. While investments remain strong against key areas discussed above, we see scope for ~100 bps of annualized EBIT margin expansion in the coming years, which would be upside to Street estimates.

Exhibit 167: AMZN GS Estimates vs. Consensus
$mm

	Q3 2021			2021			2022		
	GS Est	Cons Est	% GS vs. Cons	GS Est	Cons Est	% GS vs. Cons	GS Est	Cons Est	% GS vs. Cons
Total Revenue	$ 113,123	$ 111,737	1%	$ 475,951	$ 476,170	0%	$ 575,636	$ 563,482	2%
Online Stores	$ 53,185	$ 51,875	3%	$ 229,017	$ 238,086	-4%	$ 273,408	$ 272,740	0%
Physical Stores	$ 3,902	$ 4,091	-5%	$ 16,162	$ 16,482	-2%	$ 16,647	$ 17,174	-3%
Retail Third-Party Seller Services	$ 24,523	$ 24,202	1%	$ 105,017	$ 104,651	0%	$ 127,257	$ 128,137	-1%
Retail Subscription Services	$ 7,755	$ 8,080	-4%	$ 31,725	$ 32,057	-1%	$ 38,070	$ 38,603	-1%
Other	$ 8,097	$ 8,088	0%	$ 33,492	$ 33,614	0%	$ 44,011	$ 44,148	0%
AWS	$ 15,661	$ 15,412	2%	$ 60,538	$ 60,280	0%	$ 76,243	$ 76,485	0%
North America Sales	$ 67,982	$ 67,495	1%	$ 282,779	$ 283,353	0%	$ 325,195	$ 329,156	-1%
International Sales	$ 29,480	$ 29,898	-1%	$ 132,634	$ 132,023	0%	$ 174,198	$ 159,747	9%
GAAP Gross Profit	$ 47,064	$ 47,088	0%	$ 196,249	$ 197,323	-1%	$ 239,513	$ 236,974	1%
GAAP Operating Income	$ 6,020	$ 5,663	6%	$ 30,846	$ 30,397	1%	$ 43,749	$ 42,838	2%
Operating Margin	5.3%	5.1%	5%	6.5%	6.4%	2%	7.6%	7.6%	0%
GAAP EPS (diluted EPS)	$ 8.68	$ 9.05	-4%	$ 51.69	$ 53.15	-3%	$ 64.79	$ 67.40	-4%
FCF (TTM)	$ 9,623	$ 7,162	34%	$ 29,264	$ 22,838	28%	$ 48,468	$ 52,559	-8%

Source: FactSet, Goldman Sachs Global Investment Research

Valuation & Risk/Reward Framework

Referencing our valuation framework, we apply the two-pronged approach for more mature companies (~20% or lower growth in the forward 2-3 years) to our Amazon price target. Given the different segments of Amazon's business, we also apply two SOTP methods to reportable segments and geographies. Our $4,250 12-m price target is based on an equal blend of: (1) An equal blend of EV/GAAP EBITDA applied to our 2023 estimates and a modified DCF using an EV/(FCF-SBC) multiple applied to our 2026 estimates discounted back 3 years; (2) SOTP of EV/Sales applied to our 2023 estimates for 1P, 3P, Retail Subscription, AWS and Other segments; (3) SOTP of EV/EBIT applied to North America and AWS segments, and EV/Sales applied to the International segment. Specifically:

Exhibit 168: AMZN Price Target Analysis

Blended Valuation		Valuation
Standard Multiples Approach (Consolidated EV/EBITDA, EV/FCF-SBC)	$	4,250
SOTP Valuation (Method 1)	$	4,320
SOTP Valuation (Method 2)	$	4,180
Price Target Based on Average of 3 Valuation Approaches	**$**	**4,250**

Source: Goldman Sachs Global Investment Research

Method 1

- 18.5x EV/GAAP EBITDA (or 0.6x EV/EBITDA-to-growth) applied to our 2023 estimates. Over the past 3 years, AMZN has traded at an EV/EBITDA range of 18x to 28x on a one year forward multiple basis (or a ratio of 0.6x to 1.1x when adjusted for growth).
- 27.5x EV/FCF-SBC multiple applied to our 2026 estimates discounted back 3 years at 12%. The discount rate represents CAPM using the blended average of companies within our coverage universe consisting of: (1) 3% risk free rate (based on the normalized 10-year rate); (2) average beta of ~1.3; (3) equity risk premium of 7%.

Exhibit 169: AMZN Valuation Method 1

$mm except per share data

Scenario Analysis	Downside	Base	Upside
Valuation	$ 2,190	$ 4,250	$ 6,450
% upside/downside	-38%	21%	84%
Sales (FY22E)	$ 529,585	$ 575,636	$ 621,687
Downside/Upside Adjustment	-8%	-	8%
Sales (FY23E)	$ 612,903	$ 681,004	$ 749,104
Downside/Upside Adjustment	-10%	-	10%
EV / 2023 Sales	1.7x	3.0x	4.5x
Sales CAGR ('21-'23)	13.5%	19.6%	25.5%
EV / Sales to Growth	0.13x	0.15x	0.18x
GAAP EBITDA (FY22E)	$ 68,846	$ 85,347	$ 105,687
GAAP EBITDA Margin %	13.0%	14.8%	17.0%
GAAP EBITDA (FY23E)	$ 79,677	$ 109,828	$ 134,839
GAAP EBITDA Margin %	13.0%	16.1%	18.0%
EV / 2023 GAAP EBITDA	13.0x	18.5x	25.0x
GAAP EBITDA CAGR ('21-'23)	11%	30%	44%
EV / GAAP EBITDA-to-Growth	1.18x	0.61x	0.56x
Enterprise Value	$ 1,035,807	$ 2,031,820	$ 3,370,969
FCF-SBC (FY26E)	$ 90,950	$ 109,900	$ 128,400
FCF-SBC as % Sales	8.5%	10.3%	12.0%
EV / 2026 (FCF-SBC)	17.0x	27.5x	32.0x
FCF-SBC CAGR ('23-26)	27.2%	35.5%	42.7%
Discount Rate	15%	12%	10%
Discount Period (Years)	3	3	3
Enterprise Value (2026)	$ 1,546,151	$ 3,022,258	$ 4,108,803
Discounted Enterprise Value (2023)	$ 1,016,619	$ 2,151,184	$ 3,087,004
Weighting			
EV derived from GAAP EBITDA	50%	50%	50%
EV derived from FCF-SBC	50%	50%	50%
Enterprise Value	$ 1,026,213	$ 2,091,502	$ 3,228,987
Capital Structure Adjustments			
Adjusted Net Debt - 2022E	$ (108,689)	$ (108,689)	$ (108,689)
Shares Outstanding - 2022E	517.8	517.8	517.8

Source: Company data, Goldman Sachs Global Investment Research

Method 2

- 1.0x EV/Sales applied to 1P Revenue, 2.5x to 3P Revenue, 3.0x to Retail Subscription Revenue, 10.0x to AWS Revenue and 6.0x to Other Revenue, all based on 2023 estimates.

Exhibit 170: AMZN Valuation Method 2
$mm except per share data

SOTP Method 1	2021	2022	2023
1P Revenue	$ 245,179	$ 290,055	$ 337,034
EV / 2023 Sales			1.0x
Sales CAGR ('21-23)			*17.2%*
EV / Sales to Growth			0.06x
Enterprise Value			$ 337,034
3P Revenue	$ 105,017	$ 127,257	$ 147,618
EV / 2023 Sales			2.5x
Sales CAGR ('21-23)			*18.6%*
EV / Sales to Growth			0.13x
Enterprise Value			$ 369,046
Retail Subscription Revenue	$ 31,725	$ 38,070	$ 45,304
EV / 2023 Sales			3.0x
Sales CAGR ('21-23)			*19.5%*
EV / Sales to Growth			0.15x
Enterprise Value			$ 135,911
AWS Revenue	$ 60,538	$ 76,243	$ 94,714
EV / 2023 Sales			10.0x
Sales CAGR ('21-23)			*25%*
EV / Sales to Growth			0.40x
Enterprise Value			$ 947,144
Other Revenue	$ 33,492	$ 44,011	$ 56,334
EV / 2023 Sales			6.0x
Sales CAGR ('21-23)			*29.7%*
EV / Sales to Growth			0.20x
Enterprise Value			$ 338,003
Total Enterprise Value			$ 2,127,137
Net Debt (Cash)			$ (108,689)
Market Cap ($m)			$ 2,235,825
Diluted Shares			517.8
Valuation			**$ 4,320**

Source: Company data, Goldman Sachs Global Investment Research

Method 3

- 30x EV/GAAP EBIT applied to North America business, 3.0x EV/Sales applied to International business and 30x EV/GAAP EBIT applied to AWS business, all based on 2023 estimates.

Exhibit 171: AMZN Valuation Method 3
$mm except per share data

SOTP Method 2	2021	2022	2023
North America Operating Income	$ 10,369	$ 13,375	$ 20,809
EV / 2023 GAAP OI			30.0x
Operating Income CAGR			*41.7%*
EV / GAAP OI to Growth			0.72x
Enterprise Value			$ 624,265
International Revenue	$ 132,634	$ 174,198	$ 215,567
EV / 2023 Sales			3.0x
Sales CAGR ('21-23)			*27.5%*
EV / Sales to Growth			0.11x
Enterprise Value			$ 646,700
AWS Operating Income	$ 16,735	$ 21,115	$ 26,235
EV / 2023 GAAP OI			30.0x
Operating Income CAGR			*25.2%*
EV / GAAP OI to Growth			1.19x
Enterprise Value			$ 787,049
Total Enterprise Value			$ 2,058,013
Net Debt (Cash)			$ (108,689)
Market Cap ($m)			$ 2,166,702
Diluted Shares			517.8
Valuation			**$ 4,180**

Source: Company data, Goldman Sachs Global Investment Research

In addition to our base case PT, we arrive at an upside/downside valuation scenario analysis by stress testing our base case operating estimates (revenue, EBITDA & FCF) and applying a range of higher/lower multiples (Exhibit 169). Our applied upside/downside multiples on GAAP EBITDA and FCF-SBC (discounted back) results in an upside/downside skew of ~2:1 from current levels.

Key Downside Risks

Risks to our Buy rating include:

- Any impact to eCommerce or Cloud growth from competition: offline retailers adopting omni-channel, niche eCommerce players targeting a geography or a vertical, etc.;
- Lack of success in scaling high margin businesses including Advertising, Cloud, third-party selling and the subscription business;
- Investments across any array of initiatives creating a headwind to gross or operating margin, including expansion in international markets, local/last mile delivery and fulfillment, hardware, AWS, groceries and entertainment content;
- Any product or platform changes necessary to comply with changes to the global regulatory environment;
- In addition, AMZN is exposed to the volatility caused by the global macroeconomic environment and investor risk appetite for growth stocks.

Company Description

Amazon is a global conglomerate whose primary operations include eCommerce, cloud services, video and music streaming and subscriptions and advertising. These operations are further illustrated below (percentage contribution to sales in parentheses):

- Online stores (51%): Include the company's flagship Amazon.com, which is an eCommerce website through which sales are made. The website sells both private label products and products from other brands.

- Physical stores (4%): Whole Foods Market was acquired by Amazon in 2017 and contributes to the majority of the physical store sales. Other physical stores include Amazon Pop Up and AmazonGO stores.
- Retail Third party selling services (21%): Third party vendors sell their products through Amazon.com. Amazon receives fees from sellers in the form of commissions and shipping charges.
- Retail Subscription services (7%): Amazon offers a number of subscription services, with Amazon Prime being the most popular. Prime Music, Prime Video and Prime Reading are bundled with this offering.
- Amazon Web Services or AWS (6%): Provides a host of cloud services such as storage, processing power and networking. Users are charged on a metered basis in accordance with their usage.
- Other (12%): This includes the company's advertising and payment services.

For reporting purposes, Amazon divides the company into three segments- North America, International and Amazon Web Services. As of 2020, revenues stood at $386bn (38% YoY growth), with North America sales growing 38%, international sales growing 40% and AWS sales growing 30% YoY.

eBay (NR): Investing & Repositioning For The Long Term

We are initiating coverage of EBAY with an NR (Not Rated). eBay is a global commerce company offering an eCommerce marketplace that connects buyers and 3rd party sellers in more than 190 countries around the world. eBay has undergone a transformation over the past few years as it has rationalized its asset portfolio, increased its level of shareholder returns and invested to reinvigorate its core Marketplace business for long-term growth. We expect the dominant investor debate to remain focused on how management efforts to promote growth in a post-pandemic environment will manifest in the years ahead.

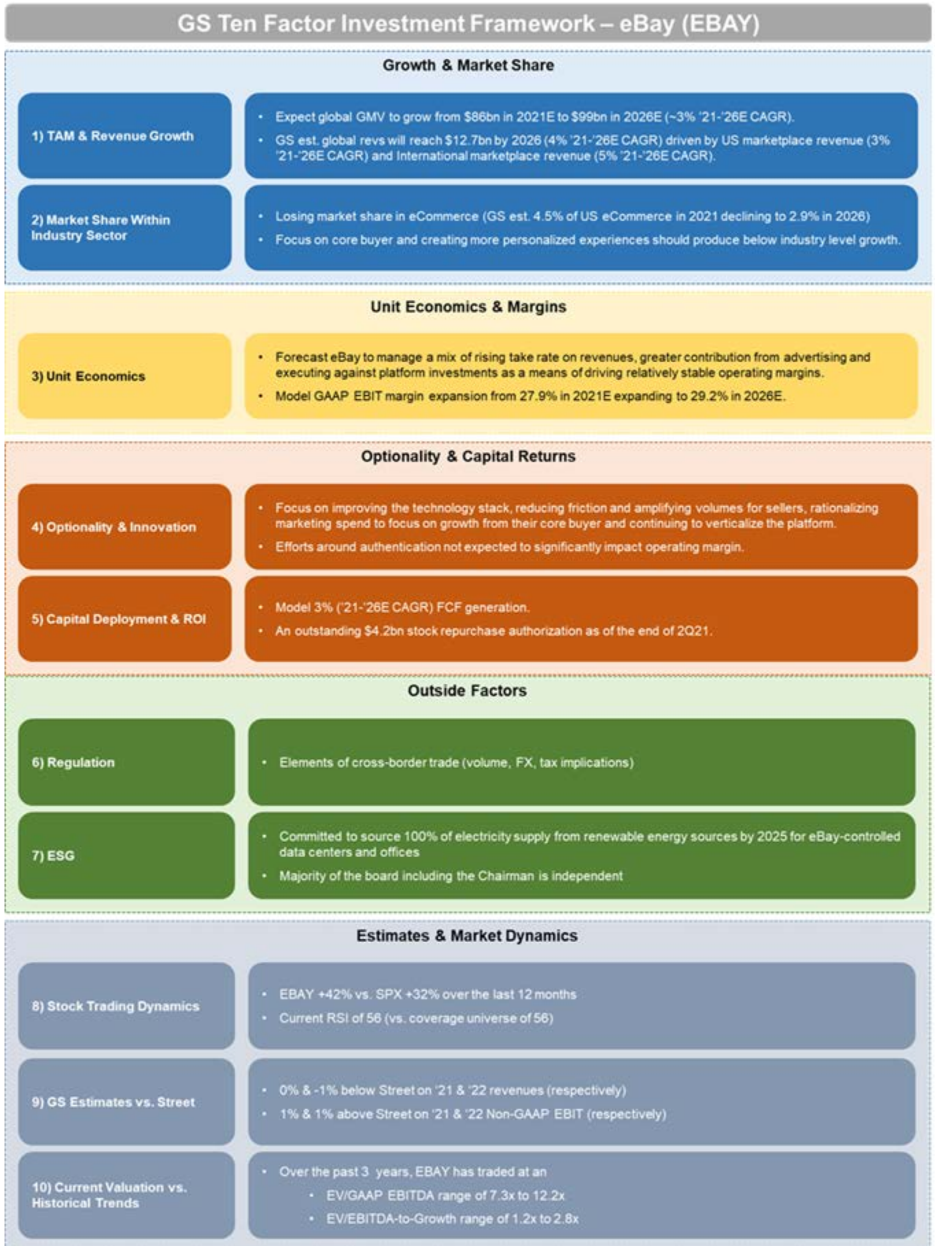
In this initiation, we frame our discussion of eBay along the lines of three key debates. **1) Will eBay be able to grow inline with eCommerce growth rates in the coming years?** Our view – Unlikely. We see eBay management increasingly focused on their core buyer and creating more personalized experiences (including by product vertical). We believe this strategy should produce low single digit revenue growth (not 10%+) over '21-'26; **2) Can eBay maintain flat operating margins beyond 2022?** Our view – Likely. We see a mix of investments in growth, rationalization of marketing and rising advertising contribution as being able to produce a relatively stable margin profile for eBay; **3) Will eBay be able to return excess capital to shareholders over our forecast period?** Our view – Very likely. In this note, we analyze the potential for eBay to return capital to shareholders if they maintain a 1.6x net debt/EBITDA ratio (1.6x being the average net debt/EBITDA ratio over the past 4 years) in '26. In such a scenario, we see eBay as capable of returning 39% of its market cap to shareholders.

We see eBay generating a '21-'26 revenue CAGR of 4% (driven by a mix of 2% US GMV growth, 4% International GMV growth and a rising take rate driven by advertising and payments mix) and a 2026 GAAP EBITDA margin of 33% (flat from our estimate in 2021). eBay has been an outperformer YTD (+51% vs 20% for SPX) on the back of a positive market reaction in the past 12-18 months as eBay benefited from the shifts in consumer behavior during the pandemic. In the short term, we expect a few key debates to drive the stock's performance: normalized post-pandemic revenue growth, margin levels at maturity and mix of business investments and shareholder returns in the coming years.

GS Internet Investing Framework

eBay screens with mixed results as we apply the key themes and tenets of our Goldman Sachs Internet Investing Framework, including a large and growing TAM in terms of eCommerce, advertising & payments, rising cadence to shareholder returns in the past 12-18 months and ESG friendly initiatives. Less constructive elements are a share loss dynamic within broader eCommerce based on our modeling, a flattish margin structure with debates around re-investments. Our operating estimates are largely inline with Street estimates.

Exhibit 172: Ten Factor Investment Framework - eBay



Source: Company data, Goldman Sachs Global Investment Research

Three Key Debates & Our View

Key Debate #1: Will eBay be able to grow inline with eCommerce growth rates in the coming years?

Our view – Unlikely. We see eBay management increasingly focused on their core buyer and creating more personalized experiences (including by product vertical). We believe such a strategy should produce low single revenue growth (not 10%+) over '21-'26.

We forecast US eCommerce sales to reach 38% of total core retail (excluding autos, gas and food) by 2026, with penetration levels increasing by roughly 200bps each year and growing from a ~$750bn market in 2020 to ~$1.4tn market in 2026 in the US. For reference, eCommerce penetration increased ~500bps in 2020, compared to an average of ~150bps per year pre-COVID, according to data from the US Census Bureau. On a category level, clothing and accessories saw the largest spike of eCommerce share gain in 2Q20, reaching close to 50% of all clothing/accessories retail sales. Since 2Q20, all categories' eCommerce penetration levels have declined sequentially, although notably holding well above pre-pandemic levels. For example, while home and home furnishings eCommerce as a % of retail sales has come down from a peak of 21.9% in 2Q20, the 13.3% in 1Q21 is still over 200bps above 1Q20 levels and over 300bps above 1Q19 levels.

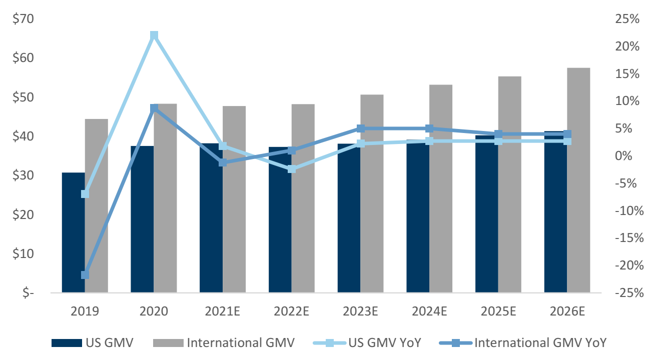
eBay was a direct beneficiary of the shift in consumer behavior during COVID-19 as consumer adoption of eCommerce accelerated under stay-at-home conditions. Over the most heightened stay-at-home dynamics in 2020, eBay produced levels of growth (31% YoY global GMV in 2Q20) not seen by the company for several years. As the company is now lapping tougher comps, we expect to see a reversion to the mean in terms of revenue performance. On its recent 2Q21 earnings call, eBay management reiterated this reversion and guided to 6-8% organic FX-neutral YoY revenue growth for 3Q21.

In our financial modeling, we forecast eBay growing US GMV from $38bn in 2021E to $41bn in 2026E (~2% '21-'26 CAGR) and US revenue growing from $4.6bn to $5.3bn (~3% '21-'26 CAGR) over the same time period. In terms of market share, we expect eBay's market share in the US to fall from 4.5% in 2021E to 2.9% by 2026E given the slower growth rate of the core eBay marketplace. We see eBay's growth moderating over our forecasted period to growth more akin to consumer spending (low single digit) rather than eCommerce (10%+), albeit aided in terms of take rate/growth rates by eBay's efforts to build/scale its Advertising and Payment initiatives.

Since eBay's CEO change in 2020, we see management as focused on a key set of initiatives to streamline eBay's asset portfolio, return capital to shareholders and re-focus the company's eCommerce efforts around driving increased activity among their core buyers, which should provide a verticalized approach to areas of eBay's marketplace and align marketing spend against their growth goals. On the company's last earnings call, management emphasized that they are no longer as focused on pure buyer growth going forward, and is instead aligning their sales/marketing/retention efforts around specific groups: a) Gen Z & millennial; b) high value buyers – ~20% of the buyer base that contributes to 75% of GMV, as opposed to low-value buyers – 50% of buyers that only contribute 5% of GMV; and c) driving an intersection of consumers that play a dual role in the marketplace as both buyer and seller.

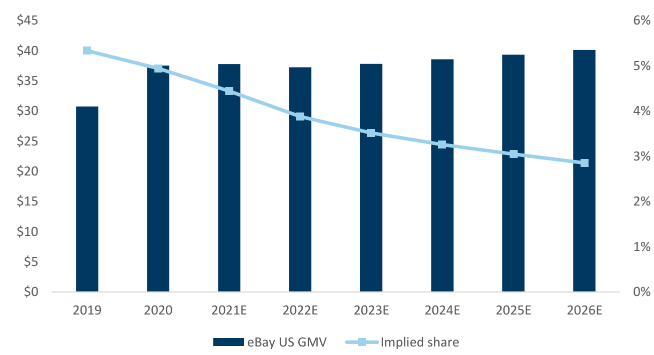
The dynamics around Managed Payments and Promoted Listing Ads (PLA) has driven a rising take rate dynamic (revenue growing faster than GMV) for eBay in the past year. We model this trend to continue, albeit at a slower rate in our 5 year forward financial modeling (Exhibit 51). Once the Payments transition is fully implemented by 2022, we expect the Payments contribution broadly lining up with Global GMV growth (with an open debate on whether that might be a conservative approach). eBay management recently reiterated that the company's Payments contribution in 2022 would be ~$2b in Revenue and ~$500m in operating income.

Exhibit 173: eBay US and International GMV
$bn, '19-'26



Source: Company data, Goldman Sachs Global Investment Research

Exhibit 174: eBay share of US eCommerce market
$bn, '19-'26



Source: Company data, Goldman Sachs Global Investment Research

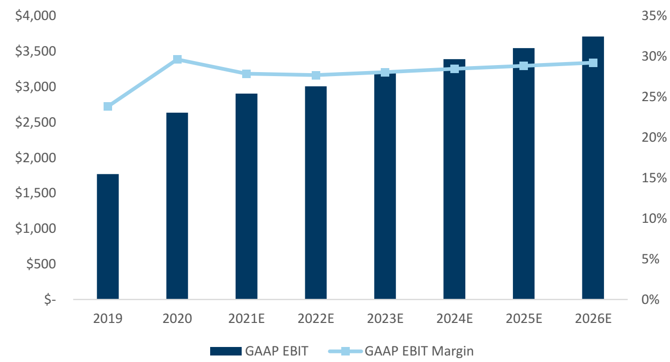
Key Debate #2: Can eBay maintain flat operating margins beyond 2022?

Our view – Likely. We see a mix of investments in growth, rationalization of marketing and rising advertising contribution as being able to produce a relatively stable margin profile for eBay.

In the coming years, we forecast eBay to manage a mix of rising take rate on revenues, greater contribution from advertising and executing against platform investments as a means of driving relatively stable operating margins despite slower than eCommerce industry growth. We see GAAP EBIT margin expansion from 27.9% in 2021E expanding to 29.2% in 2026E – driving a 5% '21-'26 EBIT CAGR.

We see eBay management continuing to focus on improving the technology stack, reducing friction and amplifying volumes for sellers, rationalizing marketing spend to focus on growth from their core buyer (a cohort that drives the vast majority of GMV volumes) and continuing to verticalize the platform in order to meet the consumer demand for such specialization and the rising competition from sub-sector vertical marketplace models. In particular, the company's efforts around authentication deserve focus as eBay is ramping authentication efforts while not significantly impacting operating margins – a debate that has driven margin volatility in much smaller marketplace models.

Exhibit 175: eBay GAAP EBIT and margin
$mm, '19-'26



Source: Company data, Goldman Sachs Global Investment Research

Key Debate #3: Will eBay be able to return excess capital to shareholders over our forecast period?

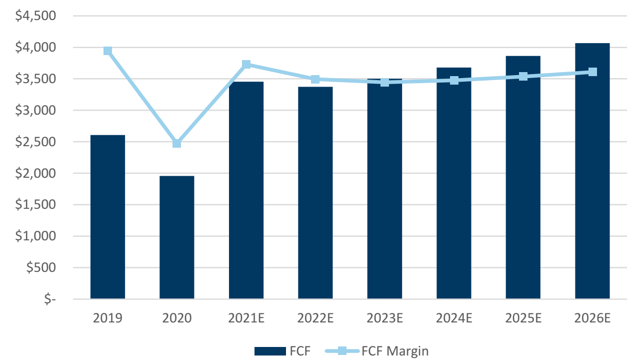
Our view – Very likely. In this note, we analyze the potential for eBay to return capital to shareholders if they maintain a 1.6x net debt/EBITDA ratio (1.6x being the average net debt/EBITDA ratio over the past 4 years) in '26. In such a scenario, we see eBay as capable of returning 39% of its market cap to shareholders.

We see eBay as focused on a mix of growth investments and capital returns in the coming years. As of Q2 '21, eBay had $6.9bn in cash, cash equivalents and short-term investments, $9.1bn of debt (equal to $2.2bn net debt) which is a gross debt to '21 EBITDA ratio of 0.65x. In addition, we forecast that eBay will generate $18.7b of FCF cumulatively across the 5 years of 2022 to 2026. Lastly, eBay recently increased its stock buyback authorization by an additional $3bn on the last earnings call – leaving the company with an open authorization of $4.2bn now.

The scope of shareholder returns by eBay could be an area where eBay surprises to the upside in coming years. In our current financial modeling, we run the remaining $4.2b stock buyback authorization over the next 4 quarters at a roughly $1bn per quarter run rate. Based on our analysis (keeping net debt to EBITDA at 1.6x in 2026E), eBay could return 39% of its market cap by allocating all incremental cash balance into shareholder returns via a buyback. We also show how EBITDA margin and net debt to EBITDA ratio assumptions could affect the % of market cap eBay could repurchase (Exhibit 178).

Exhibit 176: eBay FCF and margin

$mm, '19-'26



Source: Company data, Goldman Sachs Global Investment Research

Exhibit 177: eBay Share Repurchase Analysis

$mm, except shares

Current Estimates	**2020**	**2021E**	**2022E**	**2023E**	**2024E**	**2025E**	**2026E**
Leverage ratio (net debt to EBITDA)	1.3x	0.8x	-0.2x	-1.3x	-2.3x	-3.2x	-4.0x
Net debt (cash)	$ 4,253	$ 2,609	$ (681)	$ (4,869)	$ (8,870)	$ (12,804)	$ (16,772)
GAAP EBITDA	$ 3,219	$ 3,415	$ 3,480	$ 3,662	$ 3,834	$ 3,993	$ 4,163
EBITDA Margin	*36.2%*	*32.8%*	*32.0%*	*32.0%*	*32.2%*	*32.5%*	*32.8%*
Cash	$ 3,493	$ 6,496	$ 8,431	$ 11,469	$ 14,720	$ 17,854	$ 21,072
Debt	$ 7,746	$ 9,105	$ 7,750	$ 6,600	$ 5,850	$ 5,050	$ 4,300
Shares outstanding		668.4	631.7	629.4	636.8	643.7	650.3

Assumptions	**2020**	**2021E**	**2022E**	**2023E**	**2024E**	**2025E**	**2026E**
Average of past 4 years' net debt/EBITDA leverage							1.6x
Cash available for repurchase if average net debt/EBITDA leverage maintained							$ 23,432

Share repurchase Scenario in 2026	**2020**	**2021E**	**2022E**	**2023E**	**2024E**	**2025E**	**2026E**
Cash balance							$ 23,432
Stock price (assumed 7% annual price appreciation)							$ 91.9
Repurchase amount (m)							255.1
% of company							*39%*
Implied shares outstanding after repurchase							**395.2**

Source: Company data, Goldman Sachs Global Investment Research

Exhibit 178: eBay Share Repurchase Analysis sensitivity

# of shares, % of '26 outstanding shares

		Net debt / EBITDA ratio						
		1.3x	**1.4x**	**1.5x**	**1.6x**	**1.7x**	**1.8x**	**1.9x**
EBITDA Margin	**31.0%**	238.3	242.6	246.8	251.1	255.4	259.7	264.0
	31.5%	239.2	243.5	247.9	252.2	256.6	260.9	265.3
	32.0%	240.1	244.5	248.9	253.3	257.8	262.2	266.6
	32.5%	241.0	245.5	250.0	254.4	258.9	263.4	267.9
	33.0%	241.9	246.4	251.0	255.6	260.1	264.7	269.2
	33.5%	242.8	247.4	252.0	256.7	261.3	265.9	270.5
	34.0%	243.7	248.4	253.1	257.8	262.5	267.2	271.9

		Net debt / EBITDA ratio						
		1.3x	**1.4x**	**1.5x**	**1.6x**	**1.7x**	**1.8x**	**1.9x**
EBITDA Margin	**31.0%**	36.6%	37.3%	38.0%	38.6%	39.3%	39.9%	40.6%
	31.5%	36.8%	37.4%	38.1%	38.8%	39.5%	40.1%	40.8%
	32.0%	36.9%	37.6%	38.3%	39.0%	39.6%	40.3%	41.0%
	32.5%	37.1%	37.7%	38.4%	39.1%	39.8%	40.5%	41.2%
	33.0%	37.2%	37.9%	38.6%	39.3%	40.0%	40.7%	41.4%
	33.5%	37.3%	38.0%	38.8%	39.5%	40.2%	40.9%	41.6%
	34.0%	37.5%	38.2%	38.9%	39.6%	40.4%	41.1%	41.8%

Source: Company data, Goldman Sachs Global Investment Research

GS Estimates vs. Consensus

Exhibit 179: eBay - GS Estimates vs. Consensus
mm, except per share data

	Q3 2021			2021			2022		
	GS Est	Cons Est	% GS vs. Cons	GS Est	Cons Est	% GS vs. Cons	GS Est	Cons Est	% GS vs. Cons
GMV	$ 19,269	$ 19,072	1%	$ 85,971	$ 85,609	0%	$ 85,543	$ 85,680	0%
US GMV	$ 8,811	$ 8,479	4%	$ 38,215	$ 37,741	1%	$ 37,295	$ 37,393	0%
International GMV	$ 10,458	$ 10,597	-1%	$ 47,756	$ 48,023	-1%	$ 48,248	$ 47,994	1%
Total Net Revenue	$ 2,458	$ 2,455	0%	$ 10,424	$ 10,416	0%	$ 10,865	$ 10,995	-1%
Net Transaction Revenue	$ 2,285	$ 2,319	-1%	$ 9,739	$ 9,874	-1%	$ 10,175	$ 10,454	-3%
Other Revenue	$ 173	$ 184	-6%	$ 685	$ 734	-7%	$ 690	$ 755	-9%
Non-GAAP Operating Income	$ 755	$ 769	-2%	$ 3,466	$ 3,427	1%	$ 3,561	$ 3,581	-1%
Non-GAAP Operating Margin	30.7%	31.3%	-2%	33.3%	32.9%	1%	32.8%	32.6%	1%
Non-GAAP EPS	$ 0.87	$ 0.89	-2%	$ 3.99	$ 3.89	3%	$ 4.40	$ 4.49	-2%
Free Cash Flow	$ 620	$ 329	88%	$ 3,457	$ 3,150	10%	$ 3,377	$ 3,140	8%

Source: FactSet, Goldman Sachs Global Investment Research

Company Description

eBay is a global commerce company in the C2C (consumer to consumer) segment offering an eCommerce marketplace that connects millions of buyers and sellers in more than 190 markets. The market comprises the online platform- www.ebay.com (accessible both through the web browser and mobile application) as well as off platform businesses in certain geographies. Roughly 37% of GMV (gross merchandise volume) is transacted in the US while 63% of GMV is transacted internationally. With 165mn active buyers by the end of 2020, Ebay has seen its buyer community continue to expand both domestically and internationally. There are 19mn active sellers on the platform and 159 TTM active buyers as of the end of 2Q21. Revenue is earned primarily through a take rate model on GMV processed through the platform, with other revenue coming from advertising and managed payment services. In 2020, net transaction revenue represented roughly 92% of total revenue with the remaining from marketing services and other revenue. Based on 2020 GMV and net transaction revenue, consolidated take rate was approximately 9.6%.

Chewy (CHWY, Neutral, $80 PT): Online Industry Leader; Risk/Reward Into 2022 Operations Drive Rating

Investment View

We are initiating coverage of Chewy with a Neutral rating and an $80 12-m PT. Chewy is the leader in the pet eCommerce category with emerging businesses in private label & pet health. In terms of its industry positioning and levels of innovation, we find Chewy to be a strong industry player with runway for growth and margin expansion in the coming years. In addition, Chewy benefited demonstrably over the last 12-18 months as consumer stay-at-home restrictions resulted in a wave of US household pet adoption (number of pet-owning households increased 5.7% in 2020 vs. pre-pandemic 5-year CAGR of 0.6%) and a shift in favor of online purchase behavior. Our Neutral rating is a reflection of more evenly balanced risk/reward skew from current levels when measured against the potential for a volatile re-opening environment ahead, a well-defined end market dynamic (on our estimates) even when including category and product expansion, and high competitive intensity among industry players.

In this initiation, we frame the Chewy investment case around three key debates: **1) What is the addressable market for Chewy in the US and can a mix of online penetration and market share dynamics sustain 20%+ topline growth over our forecast period?** Our view – Large TAM; Market share dynamics and growth rate questions remain. In our analysis, we see a ~91mm household US opportunity for pet ownership with Chewy already at ~21% penetration levels (albeit with scale in increased spend per household as well); **2) Can Chewy achieve 10%+ Adj EBITDA margins in 2026?** Our view – Work in progress & will be dependent on scale and business mix achieved in the next 3-5 years. While a greater percentage of business mix from private label and pet health could prove our forecasting to be conservative, we still think Chewy's long-term margin structure is somewhat capped by category profit levels, fulfillment, and infrastructure & industry competitive dynamics; & **3) How do we frame the opportunity for Chewy around pet health and/or expanding into International markets?** Our view – Both are potential positive drivers of Chewy's business model (in terms of revenue scale and long-term margin dynamics) in coming years – we view the health opportunity as more short/medium-term and the International market as long-term.

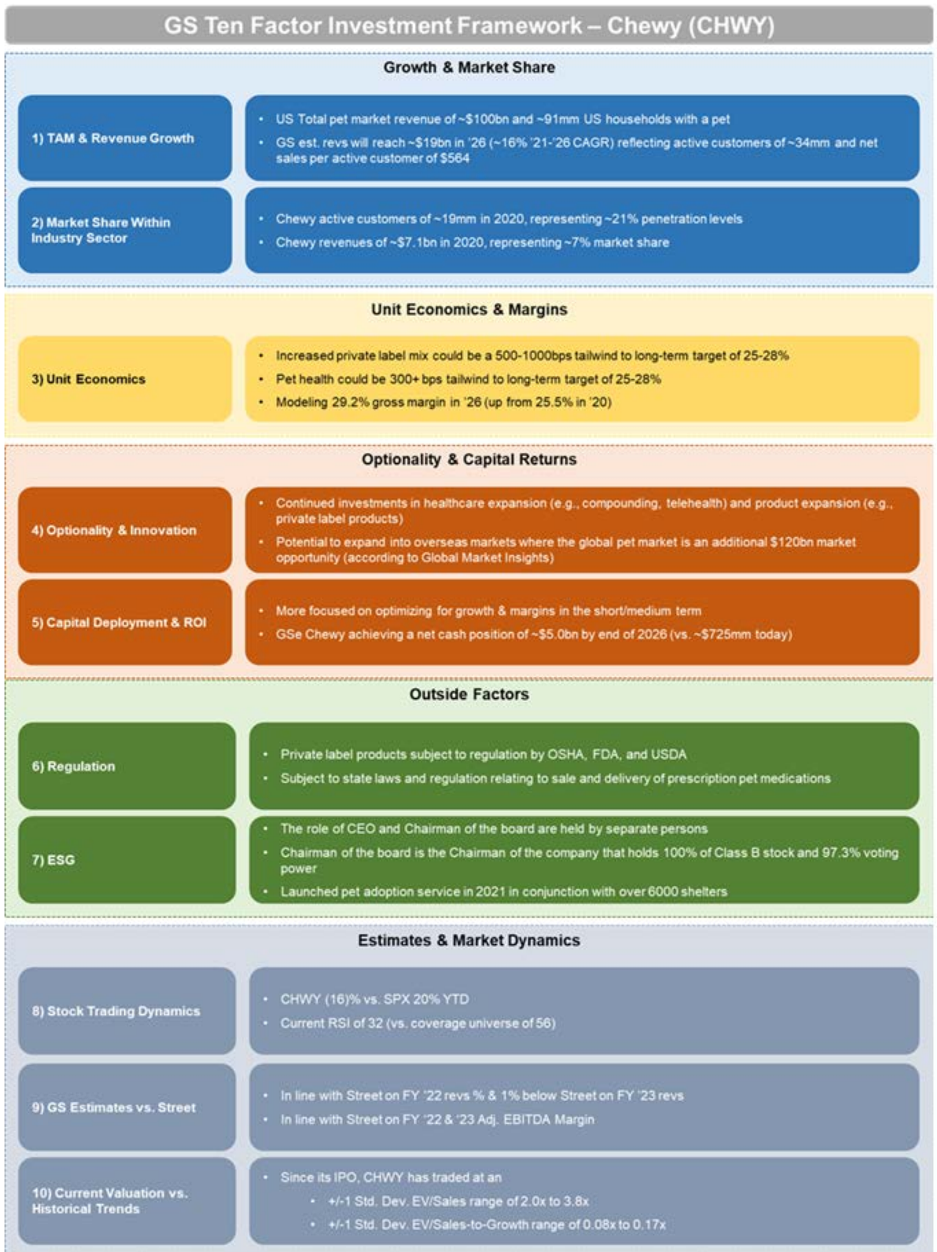
We see Chewy generating a '21-'26 revenue CAGR of 16% & a 2026 GAAP EBITDA margin of 6.8% (compared to (4.6)% in 2019). At current levels, our Neutral rating reflects a relatively evenly balanced risk/reward skew and the fact that Chewy already trades at very healthy valuation multiples (both absolute and relative to growth). In the short-term, we see the key stock debate being the shape/linearity of the online Pet eCommerce category in a post pandemic retail environment.

GS Internet Investing Framework

Chewy screens with mixed results as we apply the key themes and tenets of our

Goldman Sachs Internet Investing Framework. Positives include: a) Chewy is going to grow above industry growth; b) a market share taker within the online segment; c) rising margin profile; d) investing to drive innovation and platform evolution; & e) a number of ESG friendly initiatives. Less constructive, we see Chewy's end market (defined as the pet category) as mature and capped in terms of both revenue dollars (upper bands on pet ownership and spend per pet) compared to multi-sector diversified large platform companies. All of our industry analysis & idiosyncratic fundamental work supports our thesis for the long-term.

Exhibit 180: GS Ten Factor Investment Framework - Chewy (CHWY)



Source: Company data, Goldman Sachs Global Investment Research

Three Key Debates & Our View

Key Debate #1: What is the addressable market for Chewy in the US and can a mix of online penetration and market share dynamics sustain 20%+ topline growth over our forecast period?

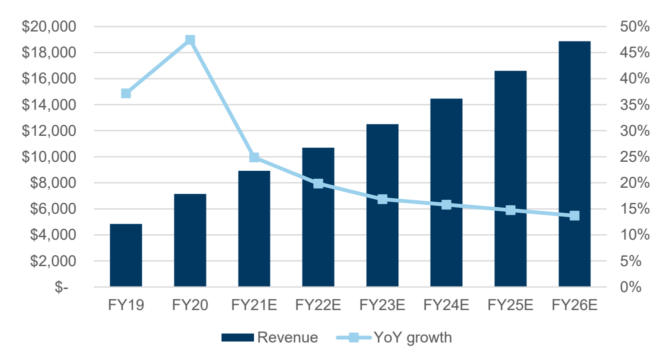
Our view – Large TAM; Market share dynamics and growth rate questions remain. In our view, this remains the top debate among investors trying to size the market opportunity in a post-pandemic world and how that market opportunity could translate into sustained revenue growth in the coming years, especially as Chewy appears priced at the high end of multiple to growth ratios (hence implying strong growth ahead already priced into the shares). In our analysis, we see a ~91mm US household opportunity for pet ownership with Chewy already at ~21% penetration levels (albeit with scale in increased spend per household as well). In addition, Chewy estimates that the entire US pet care market to be ~$100bn revenue pool in 2020 (of which Chewy already has ~7% penetration – albeit underpenetrated in private label and health). Breaking down the TAM further, Chewy and industry sources estimate that ~$60bn of the pet care market is core food and supplies (with ~30% eCommerce penetration rates), ~$35bn of the pet care market is healthcare, and the remainder is services (e.g., non-vet oriented services, grooming, boarding, etc.). Within healthcare, Rx Medication is ~$7bn, OTC medication is ~$5bn, and food & supplements are ~$3bn, amounting to a ~$15bn healthcare TAM for Chewy.

Exhibit 181: US Total Pet Care Market
$bn, 2020

US Total Pet Care Market, 2020, $bn		
Total TAM	$	100
Chewy Market Share		*7%*
TAM CHWY is Currently in	$	75
Chewy Market Share		*10%*
Core Food & Supplies	$	60
Healthcare	$	35
Vet Services & Insurance	$	20
Healthcare ex-Vets	$	15
Rx Medication	$	7
OTC Medication	$	5
Food and Supplements	$	3
Services	$	5

Source: Company data, Goldman Sachs Global Investment Research

Exhibit 182: Chewy Revenue
$mm, FY '19 - FY '26



Source: Company data, Goldman Sachs Global Investment Research

There is no doubt that Chewy stands to benefit from a set of long-term positive secular growth themes: 1) rising pet ownership (pet parents as a theme); 2) rising spend by pet parents; 3) the shift from offline retail to a mix of omnichannel and online retail; 4) the subscription-ification of consumer behavior; & 5) platform loyalty built around the inertia of consumer behavior. On the back of these market dynamics, we do expect Chewy to maintain a growth rate in excess of US eCommerce revenue growth in the coming years.

Among the long-term growth opportunities for Chewy, we would highlight: a) a rising mix of private label (also as a driver of increased gross margins); b) pet health initiatives (pharmacy, telehealth, insurance, vet care); & c) the potential to expand into overseas markets where the global pet market is an additional $120bn market opportunity (according to Global Market Insights). Successful execution on the range of these initiatives would transform Chewy into more of a platform (sustained topline growth & upside margin structure performance).

One potential headwind to flag is that recent press reports have pointed to US pet shelters receiving a wave of pets as the pandemic period has peaked (& maybe begins to recede). While not a key part of our thesis, we will continue to monitor developments around this theme as a potential headwind to customer growth in coming quarters.

Key Debate #2: Can Chewy achieve 10%+ Adj EBITDA margins in 2026?

Our view – Work in progress & will be dependent on scale and business mix achieved in the next 3-5 years. To its credit, Chewy mgmt team has been committed to scaling their business in the name of customer service, product selection, and platform expansion. While a greater percentage of business mix from private label and pet health could prove our forecasting to be conservative, we still think Chewy's long-term margin structure is somewhat capped by category profit levels, fulfillment and infrastructure, & industry competitive dynamics.

In the short/medium term, Chewy mgmt is managing through a number of headwinds/tailwinds from the pandemic impacts in terms of its margin structure. In particular, Chewy is: a) now comping into more normalized freight costs (vs. what was seen in the middle of 2020 at the height of the pandemic); b) comping against a more muted pricing/promotional environment from a year ago (when the industry saw a dramatic shift in consumption and growth); c) facing labor shortages (like all aspects of the US economy) and needing to invest in higher wages and employee incentives; & d) sustained investments in distribution (fulfillment/logistics) as volume scales and against mgmt goals of customer service (recently announced 14th fulfillment center and 4th automated fulfillment center to open in TN in fall of 2022).

In terms of margin upside, we would highlight private label mix and pet health as potentially additive to long-term margin structure. Based on our analysis & retail industry comps, increased private label mix could be a 500-1000 bps tailwind and pet health could be 300+ bps tailwind to the 25-28% gross margin level that Chewy mgmt has historically talked about for the platform long-term. In our modeling, we have gross profit margins expanding from 25.5% in 2020 to 29.2% in 2026. Success in either area could push Chewy's gross margins north of 30% long-term – however, we think this is already factored into investor expectations. In addition, Chewy mgmt has talked about achieving long-term operating efficiencies to expand margins from current levels. Such levels of 15-17% of revenue in SG&A (we model 16.4% in '26) & 6-8% of revenue spent on marketing (we model 6.8% in '26) could act as variables in surpassing the long-term 10%+ adjusted EBITDA margin threshold.

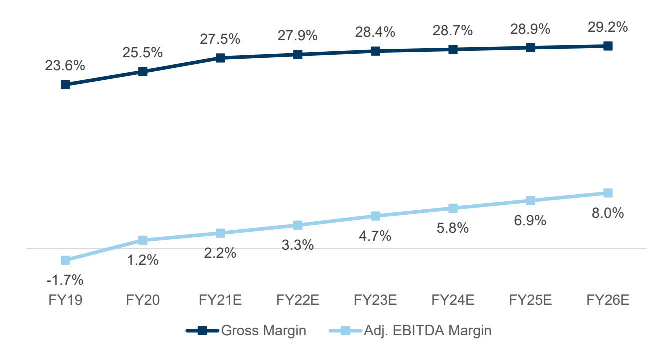
We see competition as a key variable in the pet supplies and care end market – from Amazon to offline specialists moving into omnichannel (Petco, Petsmart, etc.) and big box retailers (Walmart, Target, Costco). While Chewy has scaled an industry leadership position in online to date, we see the competitive dynamic as something that warrants continued focus in terms of customer growth, customer spend, and need to invest in marketing and/or fulfillment/logistics to differentiate and achieve 20%+ type growth already factored into the company's current market capitalization.

Exhibit 183: Company Initiatives within the Pet Category

Aug '21	Target announces plans to launch private label in pet category
Jun '21	BarkBox and Rover go public
Dec '20	PetSmart & DoorDash announce partnership to deliver pet products
Dec '20	Petco & DoorDash announce partnership to deliver pet products
May '19	Walmart opens dozens of vet clinics & launches online pharmacy

Source: Company data, Goldman Sachs Global Investment Research

Exhibit 184: Chewy Gross & Adj. EBITDA Margin
%, FY '19 - FY '26



Source: Company data, Goldman Sachs Global Investment Research

Two offsets to the competitive dynamic – a) Chewy has scaled its Autoship (subscription) offering to ~70% of revenues in the most recent quarter – while an actual subscriber # is not disclosed, we still see this as creating platform loyalty & b) Chewy continues to achieve high customer service satisfaction among its users.

Key Debate #3: How do we frame the opportunity for Chewy around pet health and/or expanding into International markets?

Our view – Both are potential positive drivers of Chewy's business model (in terms of revenue scale and long-term margin dynamics) in coming years – health more short/medium term and International market long-term.

In terms of pet health, Chewy and industry sources estimate that the US pet health opportunity is a ~$15bn market opportunity that Chewy is now addressing through a mix of organic and inorganic investments in the past 12-24 months as they align an array of health initiatives in front of their scaled used base. Some of these offerings include over-the-counter medicine, pharmacy, vet connectivity (including compounding pharmacy with 1,800 SKUs) and telehealth. The company now refers to this collective of services/products as Chewy Health and the output of successful execution in this area would likely produce increased long-term customer value and a higher margin construct (than being purely a pet category retailer).

One other potential optionality as Chewy's platform expands is the dynamic of whether mgmt will launch International operations. While we don't see this as a short/medium term initiative (based on mgmt statements), this remains a long tailed opportunity (further ~$120bn TAM outside US) that could amplify Chewy's business model on a 3-5+ year time horizon. One open question about International markets is whether Chewy would need to take the same 1P (first party) fulfillment/logistics approach that places a premium on carrying inventory and driving above average customer service experience. In the example of Amazon, we have seen International expansion take a mix of forms where Amazon has leveraged their brand awareness and supplier relationships to take a "asset lighter" 3P (third party) approach to scaling its marketplace. We don't have any International expansion currently factored into our five year forecasts.

GS Estimates vs. Consensus

Exhibit 185: Chewy GS Estimates vs. Consensus
$mm, except per share

	3FQ 2021			2021			2022		
	GS Est	Cons Est	% GS vs. Cons	GS Est	Cons Est	% GS vs. Cons	GS Est	Cons Est	% GS vs. Cons
Total Revenue	$ 2,206	$ 2,225	-1%	$ 8,943	$ 8,968	0%	$ 10,664	$ 10,798	-1%
Active customers	20.545	20.514	0%	21.223	21.196	0%	23.875	24.150	-1%
NSPAC	$ 416	$ 419	-1%	$ 421	$ 420	0%	$ 447	$ 438	2%
GAAP Gross Profit	$ 596	$ 606	-2%	$ 2,455	$ 2,469	-1%	$ 2,980	$ 3,034	-2%
GAAP Gross Margin	27.0%	27.2%	-24bps	27.5%	27.5%	-8bps	27.9%	28.1%	-16bps
Adj. EBITDA	$ 30	$ 27	12%	$ 197	$ 200	-2%	$ 357	$ 362	-1%
Adj. EBITDA Margin	1.4%	1.2%	16bps	2.2%	2.2%	-3bps	3.3%	3.4%	-1bps
GAAP EPS	$ (0.03)	$ (0.04)	-26%	$ 0.07	$ 0.08	-10%	$ 0.35	$ 0.32	8%

Source: Company data, Goldman Sachs Global Investment Research, FactSet

Valuation & Risk/Reward Framework

Referencing our broader valuation framework, we apply the two-pronged approach for growth companies (~20%+ revenue growth in the forward 2-3 years) to our CHWY price target. Our $80 price target is based on an equal blend of: (1) EV/Sales applied to our 2023 estimates and; (2) a modified DCF using an EV/GAAP EBITDA multiple applied to our 2026 estimates discounted back 3 years. Specifically:

- 3.0x EV/Sales (or 0.16x EV/Sales-to-growth) applied to our FY23 estimates. This compares to a comp set of peers that have historically traded in a +/- 1 standard deviation range of 1.3x-1.9x EV/Sales on an absolute basis (or 0.2x-0.4x on an EV/Sales-to-Growth basis).
- 32.0x EV/GAAP EBITDA multiple applied to our FY26 estimates discounted back 3 years at 12%. The discount rate represents CAPM using the blended average of companies within our coverage universe consisting of: (1) 3% risk free rate (based on the normalized 10-year rate); (2) average beta of ~1.3; (3) equity risk premium of 7%.

Exhibit 186: CHWY Price Target Analysis
$mm, except per share

Scenario Analysis	Downside	Base	Upside
Valuation	$ 38	$ 80	$ 121
% upside/downside	-50%	6%	59%
Sales (FY22E)	$ 9,598	$ 10,664	$ 11,731
Downside/Upside Adjustment	-10%	-	10%
Sales (FY23E)	$ 11,017	$ 12,520	$ 14,022
Downside/Upside Adjustment	-12%	-	12%
EV / 2023 Sales	1.5x	3.0x	4.0x
Sales CAGR ('21-'23)	11%	18%	25%
EV / Sales to Growth	0.14x	0.16x	0.16x
Enterprise Value	$ 16,526	$ 37,559	$ 56,087
GAAP EBITDA (FY26E)	$ 1,055	$ 1,304	$ 1,534
GAAP EBITDA Margin %	5.5%	6.8%	8.0%
GAAP EBITDA CAGR ('23-'36)	34%	44%	52%
EBITDA to Growth	0.6x	0.7x	0.8x
EV / 2026 GAAP EBITDA	20.0x	32.0x	40.0x
Discount Rate	15.0%	12.0%	10.0%
Discount Period (Years)	3	3	3
Enterprise Value (2025)	$ 21,094	$ 41,732	$ 61,363
Discounted Enterprise Value (2022)	$ 13,869	$ 29,704	$ 46,103
Weighting			
EV derived from Sales	50%	50%	50%
EV derived from GAAP EBITDA	50%	50%	50%
Enterprise Value	$ 15,198	$ 33,631	$ 51,095
Capital Structure Adjustments			
Adjusted Net Debt - 2022E	$ (1,052)	$ (1,052)	$ (1,052)
Shares Outstanding - 2022E	432.1	432.1	432.1

Source: Company data, Goldman Sachs Global Investment Research

Key Risks

Risks to our Neutral rating include:

- Customer growth (surprising either to the upside or downside vs. our estimates);
- Rate of customer Autoship (subscription) adoption and the potential impacts on basket size; &
- Level of execution on private label, pet health, and international expansion.

Company Description

Chewy is an online retailer, that states its missions is "to be the most trusted and convenient online destination for pet parents (and partners) everywhere". Product offerings include but are not limited to pet products (food and treats), supplies (toys, supplement, clothing etc.) and prescription (pharmacy services), while animals catered to include dogs, cats, fish, bird, small pets, reptiles, farm animals and horses. The company has partnered with over 2,500 brands and offers over 70,000 products. Chewy's distribution network, including its strategic placement of fulfillment centers throughout the US, enables shipping to over 80% of the U.S. population overnight and almost 100% in two days. Another service provided is immediate access to veterinarians (from 8 am to 11 pm ET) through instant chatting or scheduled video appointments. Additionally, the company also has a platform called Petscriptions wherein prescription drugs purchased on their platform can be approved by vets in real time. The company also offers an Autoship subscription program wherein subscribers receive recurring delivery of products at custom defined frequencies and discounted prices, along with free vet services (in select states).

Netflix (NFLX, Neutral, $590 PT): Industry Leader Moving from Revenue to Earnings Growth

Investment View

We are initiating coverage on Netflix (NFLX) with a Neutral rating and a 12-month price target of $590. We see Netflix as the long-term industry leader in global streaming media based on: a) global leadership of existing subscriber base; b) demonstrated pricing power and leading media consumption trends among its existing users; c) demonstrable multi-year original content strategy success (increasingly driven by a focus on movies, documentaries, comedy, and local language content); d) a commitment to global content and marketing investments that sets up Netflix for sustained emerging market subscriber growth; & e) a mgmt team focused on exploring product innovation (recently a shift into mobile gaming) that can harness the power of the Netflix brand and its global scale. Over the short-term, a key debate will be the pace/cadence of subscriber growth as Netflix laps the positive impact from stay-at-home behavior in 2020. Over the medium/long-term, we see the key debate centered around competitive impacts on subscriber growth, rising content costs, and ability to execute on product innovation (e.g., gaming).

In this initiation, we frame Netflix around three key debates: **1) Will Netflix be able to maintain growth in the face of rising industry competition for subscribers and media time spent?** - Yes, we see long runway for growth against an addressable market of ~644mm global (ex China) broadband households & ~1.6bn mobile subs; **2) Can Netflix generate margin expansion & compound FCF in the coming years?** - Yes, as content costs in total level off and as Netflix's cash content costs align with its P&L content amortization, we see EBIT margin expansion from 20.8% in 2021 expanding to 33.6% in 2026; **3) Can Netflix balance innovation and favorable shareholder returns?** - Yes, we see Netflix mgmt as beginning to experiment with how to innovate around various forms of content and distribution mechanisms to deliver more value to existing subscribers and drive incremental growth.

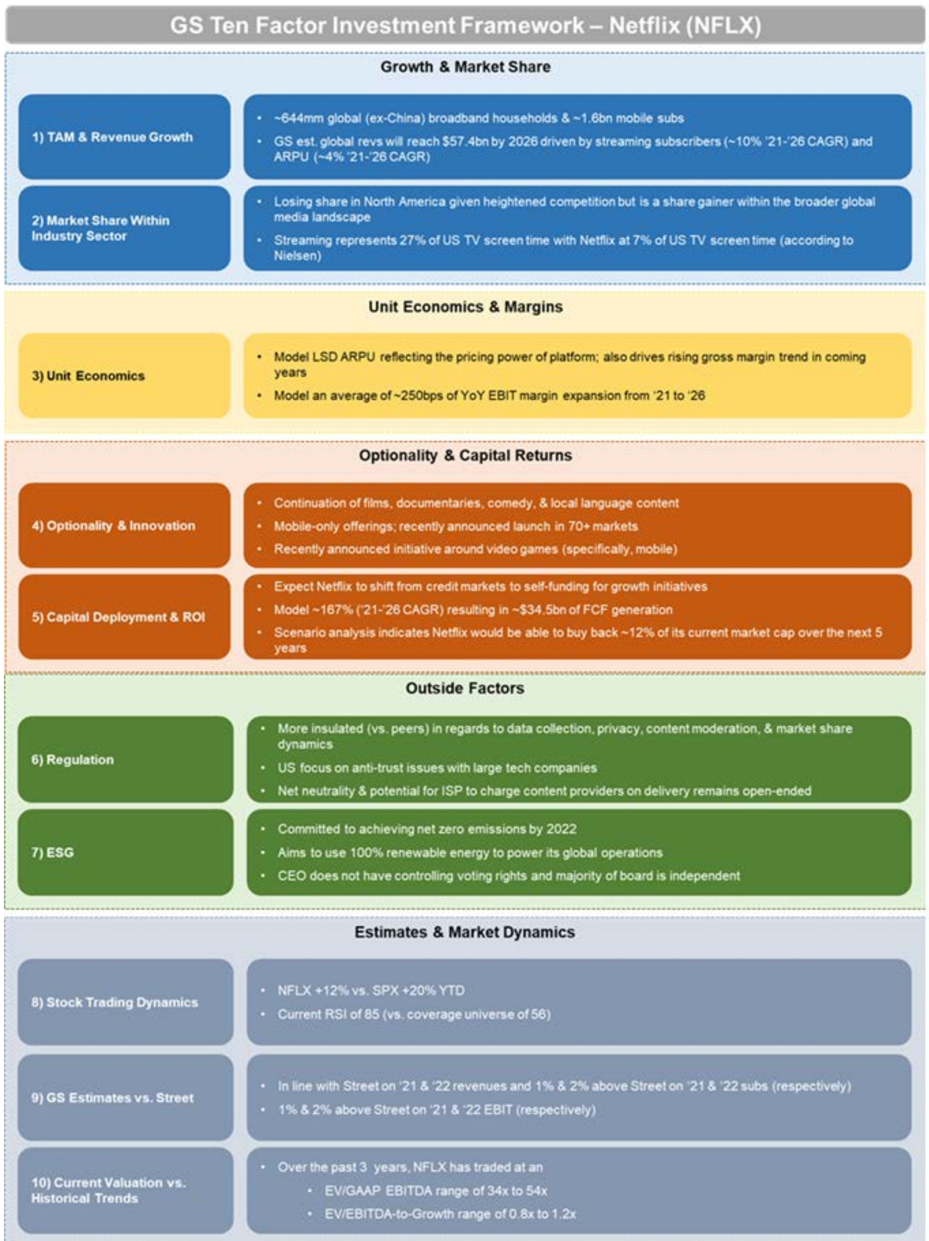
We see Netflix generating a '21-'26 revenue CAGR of ~14% (driven by a mix of ~10% subscriber growth & ~4% ARPU growth) and a 2026 EBIT margin of 33.6% (vs. 18.3% in '20) as improving operating leverage (driven by scale) and rate of change on cash content investments slow. In addition, we see Netflix mgmt's commitment to returning free cash flow to shareholders in the coming years as a commitment that demonstrates a mixture of ambitious investments driving growth & solid shareholder returns (current buyback authorization of $5bn). At current levels, our Neutral rating reflects a relatively evenly balanced risk/reward skew and the fact that Netflix already trades at very healthy valuation multiples (both absolute and relative to growth). In the short term, we expect that the user growth trajectory will likely be the key driver of stock performance.

GS Internet Investing Framework

Netflix screens with mixed results as we apply our Goldman Sachs Internet Investing

Framework, including: a) a large and growing TAM; b) product innovation; c) industry leadership; d) pricing power; e) rising margin profile; f) forward shareholder returns; g) low regulatory risk; & h) ESG-friendly initiatives. Negatives include: a) lack of clarity around net add trajectory given COVID-19 impacts; b) ARPU pressure as the company looks to penetrate emerging markets; & c) rising levels of competitive intensity & content costs. Our industry & idiosyncratic fundamental work supports our long-term thesis.

Exhibit 187: Ten Factor Investment Framework - Netflix (NFLX)



Source: Company data, Goldman Sachs Global Investment Research, FactSet

Three Key Debates & Our View

Key Debate #1: Will Netflix be able to maintain growth in the face of rising industry

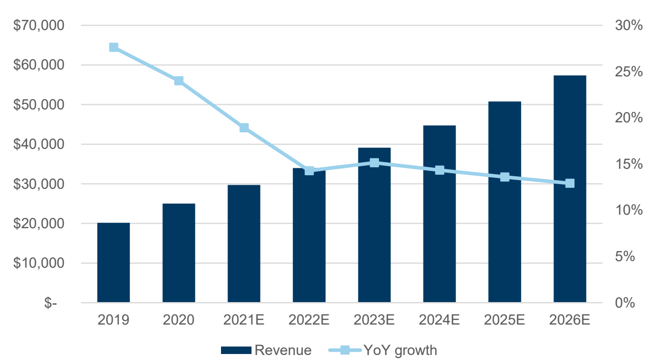
competition for subscribers and media time spent?

Our View – Yes. With ~210mm subscribers today, Netflix has a long runway for growth against an addressable market of ~644mm global (ex China) broadband households & ~1.6bn mobile subs. In addition, the company recently noted that Nielsen measures streaming media at only 27% of US video media consumption and Netflix only at 7% total market share of that total consumption. We expect Netflix will produce ~14% revs CAGR from '21-'26, well in excess of low to mid-single digit global GDP growth.

While Netflix is losing share in its most mature market (North America) as recently launched services from traditional media companies have caused landscape dispersion, Netflix is still a share taker within the broader global media landscape (both in terms of subscriber growth and time spent on its platform). Going forward, we model accelerating net adds growth in LatAm and APAC reflecting our conviction in Netflix's ability to capture market share in emerging markets supported by mobile-only plans (with Netflix recently rolling this offering out in 70+ new markets vs. 5 originally as of 2019) and a continued push into producing local content. Conversely, we expect net adds in more developed regions (UCAN & EMEA) to decelerate given already high penetration levels.

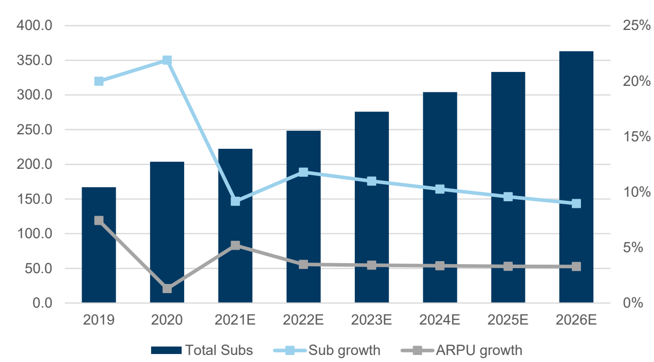
Over the past few years, Netflix has passed along a series of price increases to consumers that have (at worst) had temporary impacts on churn and gross subscriber addition dynamics; however, we note the more recent price increases have demonstrated lower impacts against a larger sub base vs. prior price increases. In line with management's broad guidance over the long-term, we model a low-single digit ARPU assumption reflecting the pricing power of the platform as Netflix continues to enhance the value proposition to consumers. We also believe the pricing power dynamic should continue to drive a rising gross margin trend in the coming years (which we further discuss below).

Exhibit 188: Netflix Total Revenue
$mm, '19-'26



Source: Company data, Goldman Sachs Global Investment Research

Exhibit 189: Netflix Subscribers & ARPU
mm, $, '19-'26



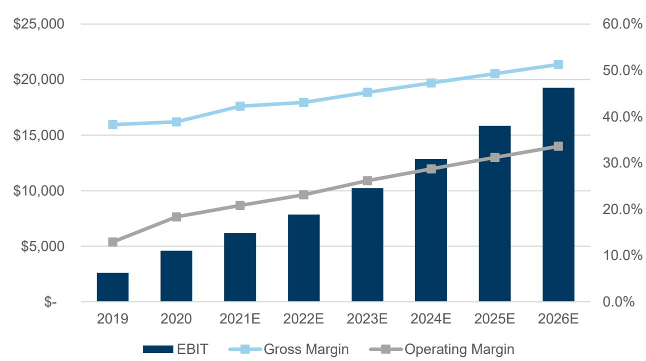
Source: Company data, Goldman Sachs Global Investment Research

Key Debate #2: Can Netflix generate margin expansion & compound FCF in the coming years?

Our View – Yes. As discussed above, Netflix's price increases are expected to be one of the main drivers of margin expansion going forward given the leverage of content amortization (whereby ~90% of content is amortized within four years after its launch on an accelerated basis). As content costs in total level off and as Netflix's cash content costs align with its P&L content amortization, we see EBIT margin expansion from 20.8% in 2021 expanding to 33.6% in 2026 – driving a ~26% '21-'26 EBIT CAGR.

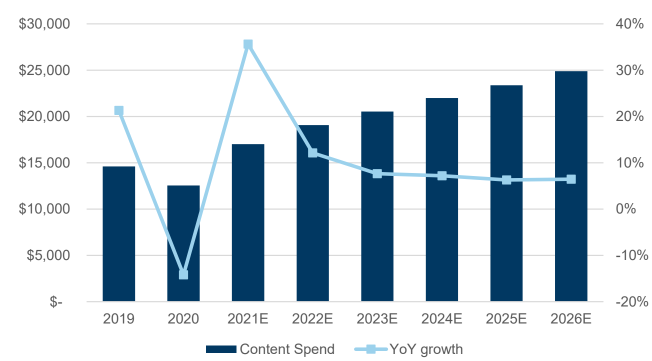
Similar to the rising margin dynamic discussed above, our forecasted model shows Netflix moving from cash burn into self-funding followed quickly in the coming years by solid FCF growth (~167% CAGR from '21-'26). While we expect content spend to continue to grow, we model a decelerating rate of incremental spend, leveling off at ~$25bn in content spend by 2026 (in line with Disney GS estimate of ~$25bn excluding sports). In aggregate, we expect Netflix to generate a cumulative ~$35bn from '21-'26 in FCF.

Exhibit 190: Netflix GAAP Gross & Operating Margin
$mm, '19-'26



Source: Company data, Goldman Sachs Global Investment Research

Exhibit 191: Netflix Content Spend
$mm, '19-'26



Source: Company data, Goldman Sachs Global Investment Research

Key Debate #3: Can Netflix balance innovation and favorable capital allocation?

Our View – Yes. Similar to other scaled subscriber models under our coverage universe, we see Netflix mgmt as beginning to experiment with how to innovate around various forms of content and distribution mechanisms to deliver more value to existing subscribers and drive incremental growth (both in the sub base and pricing). In this category we would highlight a shift into long form movie content and local language content. Looking ahead, we will be watching Netflix's announced entry into gaming (initially with a mobile focus) and other mediums of content that could expand their mindshare among subscribers. We don't see Netflix launching an ad-supported tier or entering the live sports genre (with its expensive rights costs). In addition, Netflix management has commented that any M&A would need to be an asset that accelerates strategic initiatives.

Coupled with Netflix mgmt's commitment to return FCF to shareholder, we see this as a strong sign of the company's ability to manage growth and returns. Below we provide a scenario analysis around Netflix's implied PE ratio assuming the company chooses to allocate 100% of annual FCF generation to buy back stock. Based on our analysis, Netflix would be able to buy back 12% of its current market cap.

Exhibit 192: Share Buyback Analysis
mm except per share data

	2022E	2023E	2024E	2025E	2026E
Free Cash Flow	$ 1,408	$ 3,787	$ 6,447	$ 9,656	$ 13,148
% of FCF Used for Repurchases	*100%*	*100%*	*100%*	*100%*	*100%*
Total Potential Share Repurchases	$ 1,408	$ 3,787	$ 6,447	$ 9,656	$ 13,148
Stock Price*	$ 649	$ 695	$ 743	$ 795	$ 851
Potential Shares Repurchased	2	5	9	12	15
GSe Share Repurchases	$ 1,659	$ 2,370	$ -	$ -	$ -
Total Potential Share Repurchases	$ 1,408	$ 3,787	$ 6,447	$ 9,656	$ 13,148
GSe Avg Diluted Shares	453	450	450	450	450
GSe Avg Shares Repurchased	3	4	-	-	-
Potential Shares Repurchased	2	5	9	12	15
Potential Avg Diluted Shares	454	449	441	438	435
Implied GAAP EPS	$ 13.45	$ 18.10	$ 23.50	$ 29.70	$ 36.79
% upside vs. GS ests	*0%*	*0%*	*2%*	*3%*	*4%*
Implied PE	**45.1x**	**33.5x**	**25.8x**	**20.4x**	**16.5x**
Average Assumed Price	$ 785				
Total Shares Repurchased (mm)	43.89				
Total Potential Share Repurchases	$ 34,445				
% of Current Market Cap	12%				

*Assumes 7% annual appreciation. Share price as of 9/7/2021.

Source: Company data, Goldman Sachs Global Investment Research

GS Estimates vs. Consensus

Exhibit 193: Netflix GS Estimates vs. Consensus
$ mm

	Q3 2021			2021			2022		
	GS Est	Cons Est	% GS vs. Cons	GS Est	Cons Est	% GS vs. Cons	GS Est	Cons Est	% GS vs. Cons
Revenue	$ 7,500	$ 7,477	0%	$ 29,726	$ 29,642	0%	$ 33,972	$ 33,968	0%
UCAN	$ 3,247	$ 3,260	0%	$ 12,940	$ 12,960	0%	$ 13,965	$ 13,888	1%
EMEA	$ 2,477	$ 2,452	1%	$ 9,798	$ 9,711	1%	$ 11,624	$ 11,468	1%
LatAM	$ 880	$ 894	-2%	$ 3,483	$ 3,514	-1%	$ 3,974	$ 4,156	-4%
APAC	$ 848	$ 838	1%	$ 3,318	$ 3,294	1%	$ 4,260	$ 4,264	0%
DVD	$ 47	$ 33	45%	$ 187	$ 162	15%	$ 149	$ 192	-22%
Paid Streaming Subs	213.2	212.9	0%	222.3	220.9	1%	248.5	244.7	2%
UCAN	74.3	74.4	0%	75.2	75.1	0%	77.7	77.1	1%
EMEA	69.9	69.9	0%	74.0	73.1	1%	85.1	82.7	3%
LatAM	39.7	39.5	1%	41.1	41.1	0%	46.0	46.2	0%
APAC	29.3	29.2	0%	32.0	31.3	2%	39.6	38.8	2%
Net Adds	4.0	3.7	10%	18.7	17.2	9%	26.2	23.8	10%
UCAN	0.4	0.4	-14%	1.3	1.2	9%	2.5	2.0	25%
EMEA	1.3	1.2	8%	7.3	6.4	13%	11.2	9.5	17%
LatAM	1.0	0.8	25%	3.6	3.6	1%	4.9	5.1	-3%
APAC	1.4	1.4	4%	6.5	5.8	12%	7.6	7.4	3%
Operating Income	$ 1,549	$ 1,553	0%	$ 6,187	$ 6,143	1%	$ 7,853	$ 7,733	2%
Operating Margin	20.7%	20.8%	-1%	20.8%	20.7%	0%	23.1%	22.8%	2%
FCF	$ 174	$ 13	n/a	$ 97	$ (64)	n/a	$ 1,408	$ 1,191	18%
GAAP EPS	$ 2.55	$ 2.55	0%	$ 10.46	$ 10.41	0%	$ 13.47	$ 12.91	4%

Source: Company data, Goldman Sachs Global Investment Research, FactSet

Valuation & Risk/Reward Framework

Referencing our valuation framework, we apply the two-pronged approach for more mature companies (~20% or lower growth in the forward 2-3 years) to our Netflix price target. Our $590 12-m price target is based on an equal blend of: (1) EV/GAAP EBITDA applied to our 2023 estimates and; (2) a modified DCF using an EV/(FCF-SBC) multiple applied to our 2026 estimates discounted back 3 years. Specifically:

- 25x EV/GAAP EBITDA (or 0.9x EV/EBITDA-to-growth) applied to our 2023 estimates. Over the past 3 years, Netflix has traded at an EV/EBITDA range of 34x to 54x on a one year forward multiple basis (or a ratio of 0.8x to 1.2x when adjusted for growth).
- 33x EV/FCF-SBC multiple applied to our 2026 estimates discounted back 3 years at 12%. The discount rate represents CAPM using the blended average of companies within our coverage universe consisting of: (1) 3% risk free rate (based on the normalized 10-year rate); (2) average beta of ~1.3; (3) equity risk premium of 7%.

Exhibit 194: Netflix Price Target Analysis
$mm except per share data

Scenario Analysis	Downside	Base	Upside
Valuation	$ 234	$ 590	$ 973
% upside/downside	*-62%*	*-3%*	*60%*
Sales (FY22E)	$ 31,254	$ 33,972	$ 36,690
Downside/Upside Adjustment	*-8%*	-	*8%*
Sales (FY23E)	$ 35,207	$ 39,119	$ 43,030
Downside/Upside Adjustment	*-10%*	-	*10%*
EV / 2023 Sales (Implied)	3.9x	7.4x	10.4x
Sales CAGR ('21-'23)	8.8%	14.7%	20.3%
EV / Sales to Growth (Implied)	0.44x	0.50x	0.51x
GAAP EBITDA (FY22E)	$ 7,188	$ 8,067	$ 9,539
EBITDA Margin %	23.0%	23.7%	26.0%
GAAP EBITDA (FY23E)	$ 7,745	$ 10,507	$ 12,909
EBITDA Margin %	22.0%	26.9%	30.0%
EV / 2023 EBITDA	12.0x	25.0x	35.0x
EBITDA CAGR ('21-23)	10.4%	28.6%	42.6%
EV / EBITDA to Growth	1.15x	0.87x	0.82x
Enterprise Value	$ 92,946	$ 262,677	$ 451,819
FCF-SBC (FY26E)	$ 10,326	$ 12,289	$ 13,195
FCF-SBC % of Sales	18.0%	21.4%	23.0%
EV / 2026 FCF-SBC	20.0x	33.0x	45.0x
FCF-SBC CAGR ('23-26)	47.8%	56.6%	60.3%
EV / FCF-SBC-to-Growth	0.42x	0.58x	0.75x
Discount Rate	15.0%	12.0%	10.0%
Discount Period (Years)	3	3	3
Enterprise Value (2025)	$ 206,525	$ 405,541	$ 593,760
Discounted Enterprise Value (2022)	$ 135,794	$ 288,656	$ 446,101
Weightings			
EV derived from GAAP EBITDA	50%	50%	50%
EV derived from (FCF-SBC)	50%	50%	50%
Enterprise Value	$ 114,370	$ 275,667	$ 448,960
Capital Structure Adjustments			
Adjusted Net Debt - 2022E	$ 8,692	$ 8,692	$ 8,692
Adjusted Shares Outstanding	452	452	452

Source: Company data, Goldman Sachs Global Investment Research

Key Risks

Risks to our Neutral rating include:

- Subscriber growth (surprising either to the upside or downside vs. our estimates);
- Price increases & resulting impact to churn and/or subscriber growth;
- Exposure to the volatility caused by the global macroeconomic environment & investor risk appetite for growth stocks;
- Industry competition & impact on subscriber growth, original content and consumer

attention; and

- Any shift in the regulatory landscape that negatively alters Netflix's costs structure.

Unlike many of its large/mega cap US Internet peers, Netflix has not been subject to substantive scrutiny from global regulators on such key issues as data collection, privacy, content moderation & market share dynamics. Conversely, we see the US focus on anti-trust issues with large tech companies (& the focus it might bring to recent content acquisitions) as a potential benefit to Netflix in the short/medium term as some competitors could be delayed from scaling their content libraries inorganically. The elements of net neutrality and whether internet service providers will charge for content providers on content delivery remains an open ended regulatory risk.

Company Description

Netflix is a subscription based streaming service and production company that provides members with commercial free TV shows and movies produced in house as well as licensed. The service is available on any internet-connected device that supports the Netflix app, such as a smart TV, gaming console, streaming media player, set-top box, smartphone, and tablet or on a computer using an internet browser. Revenue is primarily generated from subscription fees and Netflix offers a variety of subscription plans, namely- basic, standard and premium (as well as mobile only plans in select regions). The company divides its business operations by regions, namely- US and Canada (UCAN), Europe, Middle East and Africa (EMEA), Latin America (LATAM) and Asia Pacific (APAC).

Spotify (SPOT, Neutral, $260 PT): The Pivot from Streaming Music to Audio Platform

Investment View

We are initiating coverage on Spotify (SPOT) with a Neutral rating and a 12-month price target of $260. Spotify is the industry leader in global streaming and is in the process of pivoting its platform (both subscriber and ad-supported) to all forms of audio on a global scale. In its core music product, we see Spotify as having a long runway for growth (especially in emerging markets with 85 market launches). However, the unit economics of the music product is still predominantly captured by the music industry (not Spotify) and competition remains heightened among global tech platforms (e.g., Apple, YouTube, Amazon) whereby streaming music is typically viewed as an adjacent service to their core business. In the podcasting business (& broader push into audio content creation), we see potential for better margin structure and amplifying user engagement/churn but much of this issue remains too early to determine financial model success over the long-term.

In this initiation, we frame Spotify around three key debates: **1) Can Spotify maintain 15%+ topline growth over the forecast period?** Yes. We see Spotify growing from ~365mm to ~800mm users over the next 5 years (with more of the growth coming from emerging markets via the ad-supported product) but don't see Spotify scaling to ~1bn users (a recent long-term mgmt. goal) or compounding revenue at a 20% CAGR given heightened levels of competition; **2) Will Spotify scale its profit margins in a manner that will exceed 10% GAAP EBITDA margins?** No. Unfortunately, our modeling still has Spotify with too much of its unit economics tied to music industry content dynamics during the 5 year forecast period; & **3) Can Spotify emerge as the global audio platform via a mix of content investments, platform transformation and shifting consumer audio trends?** Unknown. Spotify mgmt has recently begun to focus their attention (& the company's investments) toward its podcast ambitions, its ad business & its role supporting audio content across the broader creator economy - whether such innovation will translate into demonstrable financial success remains a "show me story."

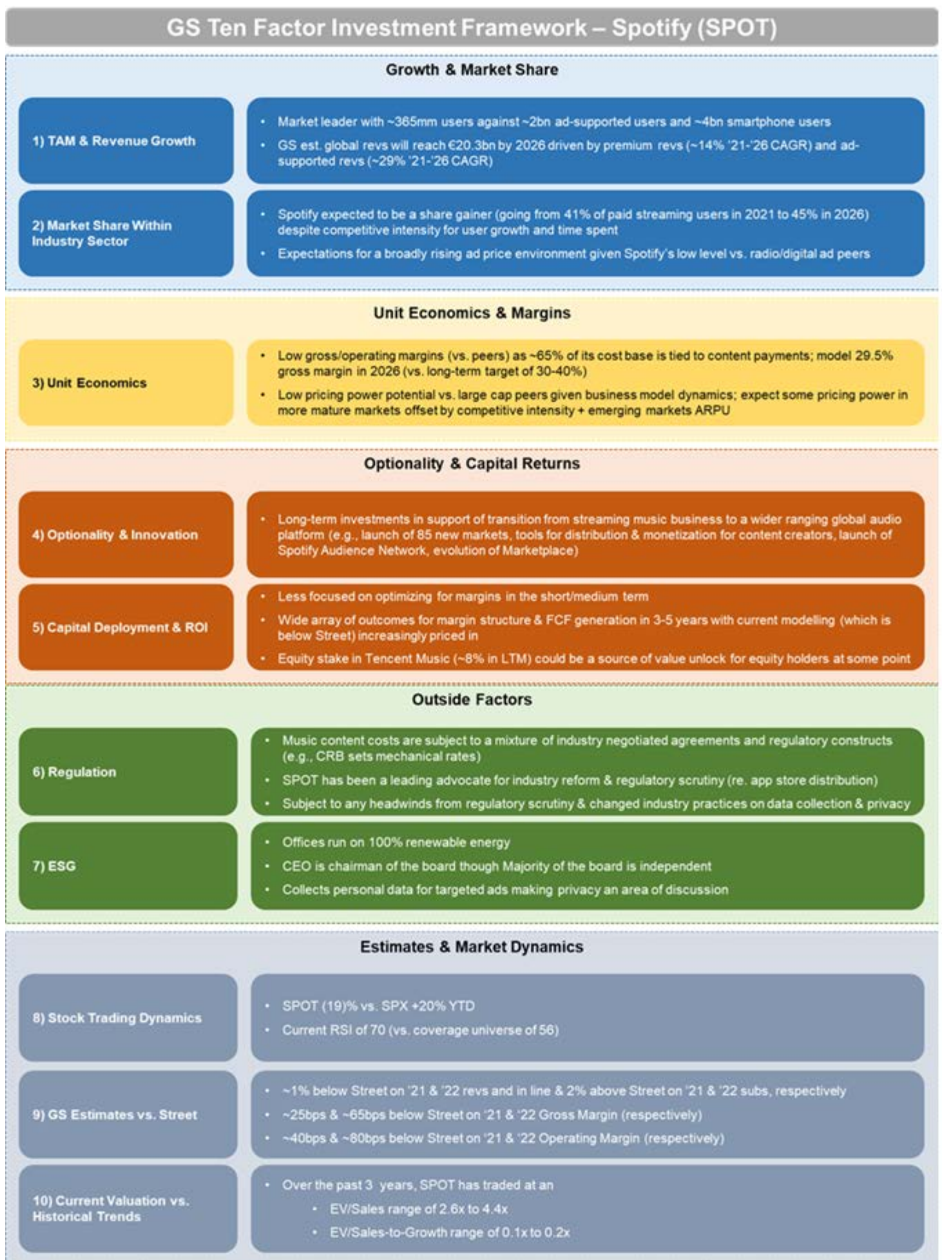
We see Spotify generating a '21-'26 revenue CAGR of 16% (driven by premium revenue at 14% and ad-supported revenue at 29%) and a 2026 gross profit margin of 29.5% and a 2026 EBIT margin of 6.9% driven by a rise in ad-supported margins, scale benefits and some success in driving returns on content spend. With the stock course-correcting ((19)% YTD), we initiate with a Neutral rating on Spotify but remain skeptical of the company reaching some of its loftier user and margin goals over the long-term (e.g., long-term user goal of ~1bn+ vs. GSe of ~800mm in 2026 and long-term gross margin goal of 30-40% vs. GSe of 29.5% in 2026).

GS Internet Investing Framework

Spotify screens with mixed results as we apply the key themes and tenets of our

Goldman Sachs Internet Investing Framework. Positives include: a) exposure to a large audio consumption addressable market (both subscriber and ad-supported); b) low exposure to regulatory risks; c) ESG friendly initiatives; d) and a stock that has underperformed and already has a lot of negative sentiment priced in. Negatives include: a) a peaked market share dynamic; b) open questions about long-term unit economics and margin structure (we don't see the upside case in our fundamental work); c) need to invest toward innovation with less certain outcomes; & d) our estimates below current Street modeling. All of our industry analysis and idiosyncratic fundamental work has provided us with a high level of conviction in our thesis for the long-term.

Exhibit 195: Ten Factor Investment Framework - Spotify (SPOT)



Source: Company data, Goldman Sachs Global Investment Research, FactSet

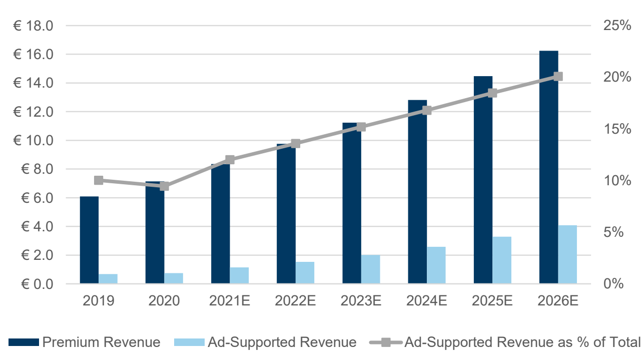
Three Key Debates & Our View

Key Debate #1: Can Spotify maintain 15%+ topline growth over the forecast period?

Our View – Yes. Spotify has market leadership of the streaming music industry market with a premium subscriber base of 165mm (against ~445mm total subscribers ex-China) and 210mm ad-supported users (against ~2bn ad-supported users) in 2021. We see Spotify as 11% penetrated of the global music TAM (as of 2020) with streaming music being 30% of the overall revenue dollar market size based on GS team's analysis from the Music in the Air report (link). Over the next 5 years, we see streaming music achieving 41% of the global music market when measured by revenue dollars. In addition, we see Spotify's revenue growth ('21-'26 revs CAGR of ~16%) above global GDP levels as the audio streaming opportunity develops.

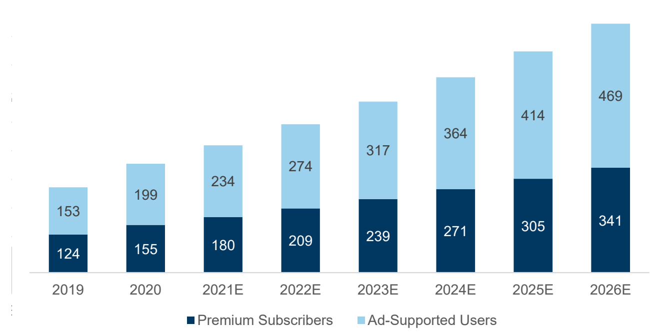
We see Spotify gaining share within the broader industry construct of music industry revenue dollars as it continues to scale engagement time across an array of audio products. Within the streaming music landscape, we see a competitive intensity for user growth and time spent remaining heightened which could likely produce volatile incremental shifts within the narrower market share dynamic of streaming music/audio competitors. In its ad-supported business, we see a broadly rising ad price environment given Spotify's starting point from a low level compared to radio/digital ad peers. In addition, we see a mix of subscriber price increases in more mature markets (especially on family products) and ARPU dilution in more emerging markets in the years ahead.

Exhibit 196: Spotify Premium & Ad-Supported Revenue
€bn, '19-'26



Source: Company data, Goldman Sachs Global Investment Research

Exhibit 197: Spotify Premium Subscribers & Ad-Supported Users
mm, '19-'26

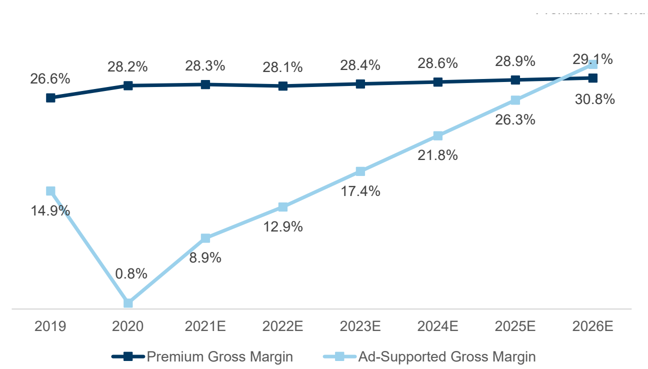


Source: Company data, Goldman Sachs Global Investment Research

Key Debate #2: Will Spotify scale its profit margins in a manner that will exceed 10% GAAP EBITDA margins during our forecast period?

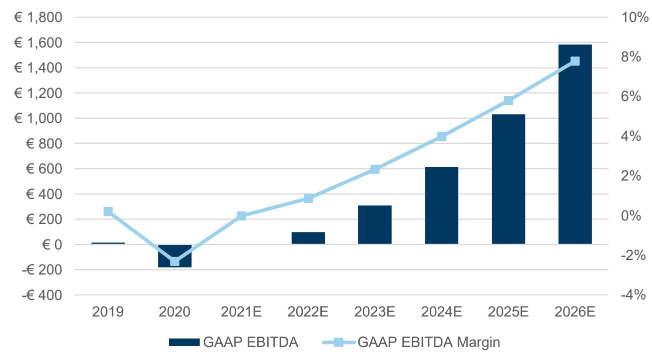
Our View – No. On a consolidated basis, Spotify still has low gross/operating margins (25.6% and (3.7)% in 2020 respectively) compared to its large/mega cap Internet peers as ~65% of its cost base is tied to content payments to the broader music industry. In addition, Spotify is in the midst of an investment program to scale its ad-supported business (both organically and through acquisition), invest in owned & exclusive podcasting content, and innovate on products around engagement and monetization over the long-term. Our modeling falls at the low end of what Spotify has talked about achieving (gross margins of 29.5% in 2026 vs. long-term target of 30-40%) as we see the investment program as still unknown it terms of the yield from those investments. As discussed above, we do see Spotify having some pricing power in more mature markets around multi-user bundled products but feel the competitive intensity around audio as a market opportunity is likely to cap that dynamic. In the end, we see Spotify as a business model that doesn't have any of the upside node earnings power potential as some of its large cap peers.

Exhibit 198: Spotify Premium & Ad-Supported Gross Margin
%, '19-'26



Source: Company data, Goldman Sachs Global Investment Research

Exhibit 199: GAAP EBITDA & Margin
€mm, '19-'26

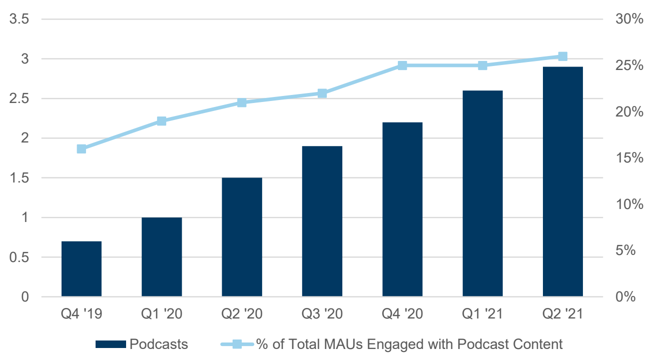


Source: Company data, Goldman Sachs Global Investment Research

Key Debate #3: Can Spotify emerge as the global audio platform via a mix of content investments, platform transformation and shifting consumer audio trends?

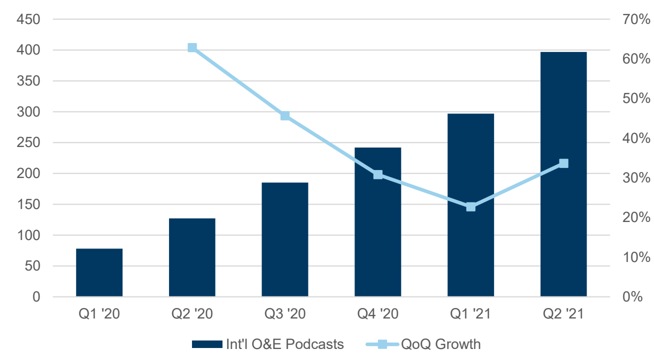
Our View – Unknown. We see Spotify management (led by founder Daniel Ek) as committed to making long-term investments in support of the transition from a streaming music business toward a wider ranging global audio platform. A few examples are: a) the launch of 85 new markets; b) tools for distribution and monetization for the music industry and a broader array of audio content creators (in particular a push by the company to expand from 8mm to 50mm creators in the next 4-5 years); c) the launch of the Spotify Audience Network (which was positively highlighted by mgmt on the most recent earnings call); d) the evolution of Marketplace (Sponsored Recommendations and Discovery Mode); & e) continued investments in original & exclusive podcasts (as can be seen below). There still remains some key upside optionality around live audio/video events that Spotify could scale over the long-term. Such success is key for revenue growth, margin structure and valuation metrics in the years ahead, in our view.

Exhibit 200: Podcasts & % of Total MAUs Engaged with Podcasts
mm, Q4 '19 - Q2 '21



Source: Company data, Goldman Sachs Global Investment Research

Exhibit 201: International Original & Exclusive Podcasts
Q1 '20 - Q2 '21



Source: Company data, Goldman Sachs Global Investment Research

GS Estimates vs. Consensus

Exhibit 202: Spotify - GS Estimates vs. Consensus

	Q3 2021			2021			2022		
	GS Est	Cons Est	% GS vs. Cons	GS Est	Cons Est	% GS vs. Cons	GS Est	Cons Est	% GS vs. Cons
Revenue	€ 2,392	€ 2,452	-2%	€ 9,483	€ 9,546	-1%	€ 11,286	€ 11,380	-1%
Premium	€ 2,112	€ 2,166	-3%	€ 8,343	€ 8,421	-1%	€ 9,752	€ 9,927	-2%
Ad-supported	€ 280	€ 285	-2%	€ 1,140	€ 1,129	1%	€ 1,534	€ 1,523	1%
Premium subs	171.0	172.5	-1%	180.3	179.5	0%	208.8	205.4	2%
Premium subs net adds	6.0	7.5	-20%	25.3	24.5	3%	28.5	25.9	10%
Ad-supported users	221.0	216.2	2%	233.5	229.1	2%	273.5	267.9	2%
Ad-supported net adds	11.0	6.2	77%	34.5	30.1	15%	40.0	38.9	3%
MAUs	380.5	381.5	0%	405.5	403.8	0%	471.0	467.1	1%
MAU net adds	15.5	16.5	-6%	60.5	58.8	3%	65.5	63.4	3%
Gross Profit	€ 594	€ 629	-6%	€ 2,463	€ 2,503	-2%	€ 2,940	€ 3,040	-3%
Gross Margin	24.8%	25.7%	-84bps	26.0%	26.2%	-25bps	26.0%	26.7%	-66bps
Operating Income	(€ 42)	(€ 28)	50%	(€ 129)	(€ 92)	-71%	(€ 38)	€ 49	n/a
Operating Margin	-1.7%	-1.1%	-61bps	-1.4%	-1.0%	-40bps	-0.3%	0.4%	-77bps
GAAP EPS	(€ 0.24)	(€ 0.26)	-8%	(€ 0.83)	(€ 0.97)	-14%	(€ 0.33)	€ 0.02	n/a

Source: Company data, Goldman Sachs Global Investment Research, FactSet

Valuation & Risk/Reward Framework

Referencing our valuation framework, we apply the two-pronged approach for growth companies (~20%+ revenue growth in the forward 2-3 years) to our Spotify price target. Our $260 price target is based on an equal blend of: (1) EV/Gross Profit applied to our 2023 estimates and; (2) applying an EV to EBITDA multiple to growth on a 5 year out EBITDA (including the impact of stock based compensation) discounted back 3 years to align with our 2 year forward approach on revenue/gross profit. Specifically:

- 11.0x EV/Gross Profit (or 0.55x EV/Gross Profit-to-growth) applied to our 2023 estimates. Over the past 3 years, Spotify has traded at an EV/Gross Profit range of 10.3x to 17.2x on a one year forward multiple basis (or a ratio of 0.4x to 0.7x when adjusted for growth).
- 35x EV/GAAP EBITDA multiple applied to our 2026 estimates discounted back 3

years at 12%. The discount rate represents CAPM using the blended average of companies within our coverage universe consisting of: (1) 3% risk free rate (based on the normalized 10-year rate); (2) average beta of ~1.3; (3) equity risk premium of 7%.

Exhibit 203: Spotify Price Target Analysis

mm except per share data

Scenario Analysis	Downside	Base	Upside
Valuation	$ 109	$ 260	$ 409
% upside/downside	-57%	2%	61%
Sales (FY22E)	€ 10,158	€ 11,286	€ 12,415
Downside/upside Adjustment	-10%	–	10%
Sales (FY23E)	€ 11,662	€ 13,253	€ 14,843
Downside/upside Adjustment	-12%	–	12%
EV / 2023E Sales (Implied)	1.3x	3.0x	4.3x
Gross Profit (FY22E)	€ 2,489	€ 2,940	€ 3,352
Gross Margin %	24.5%	26.0%	27.0%
Gross Profit (FY23E)	€ 2,916	€ 3,538	€ 4,082
Gross Margin %	25.0%	26.7%	27.5%
EV / 2023 Gross Profit	5.0x	11.0x	16.0x
Gross Profit CAGR ('21-'23)	9%	20%	29%
EV / Gross Profit to Growth	0.57x	0.55x	0.56x
Enterprise Value	€ 14,578	€ 38,921	€ 65,310
GAAP EBITDA (FY26E)	€ 1,219	€ 1,583	€ 1,829
GAAP EBITDA Margin %	6.0%	7.8%	9.0%
EV / 2026 GAAP EBITDA	20.0x	35.0x	45.0x
GAAP EBITDA CAGR ('23-'26)	58.0%	72.3%	80.8%
EV / GAAP EBITDA-to-Growth	0.35x	0.48x	0.56x
Discount Rate	15%	12%	10%
Disount Period (Years)	3	3	3
Enterprise Value (2025)	€ 24,389	€ 55,407	€ 82,311
Discounted Enterprise Value (2022)	€ 16,036	€ 39,438	€ 61,842
Weightings			
EV derived from Gross Profit	50%	50%	50%
EV derived from GAAP EBITDA	50%	50%	50%
Enterprise Value	€ 15,307	€ 39,180	€ 63,576
Enterprise Value ($)	$ 18,161	$ 46,485	$ 75,429
Capital Structure Adjustments			
Adjusted Net Debt - 2022E	(€ 2,516)	(€ 2,516)	(€ 2,516)
Adjusted Net Debt ($) - 2022E	$ (2,985)	$ (2,985)	$ (2,985)
Investments & JVs ($)	$ -	$ 887	$ 887
Shares Outstanding - 2022E	193.8	193.8	193.8

Note: Investments & JVs represent Spotify's ~8% equity stake in Tencent Music at a 15% discount based on Goldman Sachs Global Investment Research Estimates

Source: Company data, Goldman Sachs Global Investment Research

Key Risks

Risks to our Neutral rating include:

- A shift in the current competitive environment (impacts to users, pricing, content costs) that would impact our current estimates;
- The evolution of the podcasting product and its impact on gross/operating margins;
- Emerging market growth;
- Changes in consumer habits with respect to audio entertainment; &
- The impact of pricing increases on the user base and financial model.

In addition, Spotify is exposed to the volatility caused by the global macroeconomic environment & investor risk appetite for growth stocks.

Company Description

Spotify is a digital music service providing a platform for on-demand access to more than 70mm digital tracks including 2.9mm podcast titles. Spotify generates revenue on this content through its subscription-based Premium service, which allows users to listen ad-free and without restriction to music, podcasts, and videos on-demand and offline, as well as its free offering, which provides an ad-supported service across mobile, tablet, desktop, TVs, cars and connected devices. There are three types of subscription plans offered- regular, student and family- with varying prices. The company views itself as a two-sided marketplace, connecting consumers with artists and their teams by offering content and value added services to both sides. For content creators, Spotify provides the opportunity for monetization, discovery, and the use of analytics/promotional tools. Acquisition of content is done through deals with large record labels as well as with individual creators. The company also has exclusivity deals with several creators that make certain content native only to its platform.

Peloton (PTON, Neutral, $110 PT): Accelerating Its Efforts To Drive Growth

Investment View

We are initiating coverage of Peloton with a Neutral rating and a $110 12-month PT. Peloton operates an at-home fitness platform for live and on-demand classes/content. It operates through two reportable segments: Connected Fitness Products and Subscription. The Connected Fitness Product segment consists of sales of bike, tread & related accessories, and boutique & apparel sales. The Subscription segment involves the monthly subscription and credits from live studio classes. Over the past 18 months, Peloton has been a clear beneficiary of the stay-at-home dynamic around the pandemic and the main debate for the shares going forward remain the level of normalized growth, addressable market, & RoI on subscriber dynamics in the years ahead. We view Peloton as a market leader in connected fitness and don't expect that dynamic to change over our forecast period. Peloton does sit at the intersection of many secular growth themes within consumer Internet (all driven by Peloton mgmt's vertical integration approach) - hardware, software, community of users, media content, and subscription-ification of consumer behavior.

In this initiation, we frame our discussion of Peloton along the lines of three key debates: **1) What is the addressable market for Peloton and can that end market sustain 25%+ revenue growth over our forecast period?** Our view – Work in Progress. In our view, this remains the top debate among investors trying to size the market opportunity in a post-pandemic world and how that market opportunity could translate into sustained subscription user and revenue growth (the part of Peloton's business model likely to warrant the highest multiple-to-growth); **2) Can Peloton achieve 15%+ Adj EBITDA margins in 2026?** Our view – Likely. As Peloton's subscription revenue base builds and its return on marketing spend scales (especially as the company is increasingly viewed as brand synonymous with the category), we see Peloton's margins progressing toward 15%+ in 2026. Over the short-term, we see the company's forward commentary for a margin retreat in FY22 as inline with a post-pandemic environment (return of marketing, new product launches, content initiatives & manufacturing capacity); & **3) Will Peloton expand into new geographies and new product categories in the coming years?** Our view – Likely. In the last few years, Peloton has launched new country initiatives in UK, Germany, & Australia – and we believe other countries in LatAm & Western Europe are potential candidates for geographic expansion. In addition, press reports have indicated that Peloton may launch a rowing product in the coming year and Peloton mgmt comments (as recently as their last earnings call) continue to emphasize the strength category. In addition, we see recent initiatives around corporate wellness and commercial partnerships as a potential new user funnel additive in the coming years. To the contrary, we do expect the competitive environment for personal fitness platforms (gyms, digital content, health trackers, etc.) to remain robust in the coming years and any impact from competition could hamper growth and/or margins.

We see Peloton generating a '21-'26 revenue CAGR of 25% (driven by a mixture of 15%

in Connected Fitness Products and 48% in Subscription), a 2026 GAAP EBITDA margin of 11.2% (compared to (19.7)% in 2019), & a 2026 Adj. EBITDA margin of 15.6% (compared to (7.8)% in 2019) as Peloton stays focused on driving growth and product innovation in the coming years while also building scale on its Subscription user/revenue base. With its most recent earnings call, Peloton guided to FY 22 (one year forward) Connected Fitness subscriber adds of 1.3mm – a very solid outcome (if achieved) in a post-pandemic environment given heightened levels of competition of both indoor/out-of-home fitness offerings in the marketplace. On the downside, management guided margins significantly below Street estimates as the company absorbs the tread recall efforts & re-ramps its sales/marketing efforts in a post-pandemic world. From March 2020 to January 2021, Peloton stock was up +468% as its operating performance reflected the pandemic benefit. Even with a (36)% retreat YTD (vs. the SPX +20%), we still see the shares as presenting a relatively balanced risk/reward from current levels until investors have better line of sight on some of the key medium term debates.

GS Internet Investing Framework

Peloton screens with mixed results as we apply the key themes and tenets of our Goldman Sachs Internet Investing Framework. Positives include: a) a large /growing TAM (albeit one that is difficult to size); b) product innovation; c) sub-sector industry leadership; & d) rising gross/operating margins in the coming years as scale builds. Negatives include: a) the overhang of growth/margin structure in a more normalized environment (post-pandemic); & b) strong competition from indoor/outdoor fitness products/platforms. All of our industry analysis & idiosyncratic fundamental work supports our thesis for the long-term.

Exhibit 204: GS Ten Factor Investment Framework - Peloton (PTON)

GS Ten Factor Investment Framework – Peloton (PTON)

Growth & Market Share	
1) TAM & Revenue Growth	• Total core market revenue of ~$79bn and ~125mm core market fitness members by '26E (including US, UK, Canada, Germany, & Australia) • GS est. global revs will reach $12.4bn driven by Connected Fitness revs (~15% '21-'26 CAGR) and Subscription revs (~48% '21-'26 CAGR)
2) Market Share Within Industry Sector	• Estimate ~$12.4bn of revs by '26, representing ~16% market share • Estimate ~11.7mm core Peloton subscribers by '26, representing ~9% penetration levels
Unit Economics & Margins	
3) Unit Economics	• Connected fitness adj. gross margin of ~29.5% and subscription adj. gross margin of ~67.3% in FY '21 • LTV/CAC of 8.6x in FY '21 (up from 6.1x in FY '20)
Optionality & Capital Returns	
4) Optionality & Innovation	• Continued investments in product expansion (e.g., press reports indicate rowing machine) • Creating partnerships (Corporate Wellness, UnitedHealthcare partnership) to expand reach
5) Capital Deployment & ROI	• More focused on optimizing for growth & margins in the short/medium term • GSe Peloton achieving a net cash position of ~$2.9bn by end of 2026 (vs. ~$777mm today)
Outside Factors	
6) Regulation	• Tread+: ongoing CPSC investigation, DOJ and US Department of Homeland Security subpoenas, and ongoing lawsuits • Music content costs are subject to a mixture of industry negotiated agreements and regulatory constructs
7) ESG	• CEO is chairman of the board and has 29.7% voting power, with board having 58.3% voting power • $100m fund for fighting racial injustice • ESG roles embedded in functional teams
Estimates & Market Dynamics	
8) Stock Trading Dynamics	• PTON (36)% vs. SPX +20% YTD • Current RSI of 32 (vs. coverage universe of 56)
9) GS Estimates vs. Street	• ~1% above Street on FY '22 revs & in line with Street on FY '23 revs • ~1% below Street on FY '22 subs and ~1% above on FY '23 subs • ~110bps & ~130bps below Street on FY '22 & '23 Adj. EBITDA Margin (respectively)

10) Current Valuation vs. Historical Trends	• Since its IPO, PTON has traded at an
	  • +/-1 Std. Dev. EV/Sales range of 4.1x to 7.6x
	  • +/-1 Std. Dev. EV/Sales-to-Growth range of 0.08x to 0.18x

Source: Company data, Goldman Sachs Global Investment Research, FactSet

Three Key Debates & Our View

Key Debate #1: What is the addressable market for Peloton and can that end market sustain 25%+ revenue growth over our forecast period?

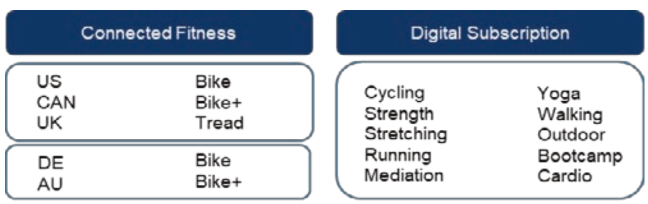
Our view – Work in Progress. In our view, this remains the top debate among investors trying to size the market opportunity in a post-pandemic world and how that market opportunity could translate into sustained subscription user and revenue growth (the part of Peloton's business model likely to warrant the highest multiple to growth). At its September 2020 analyst day, Peloton mgmt laid out their view of the long-term total addressable market for their business - the company views its total addressable market (TAM) opportunity as ~75mm households, representing the markets in which Peloton was available as of Sep 2020 (US, UK, Canada, Germany). For connected fitness & digital, the company estimates its serviceable addressable market (SAM) opportunity at ~20mm households and estimates its connected fitness SAM at ~15mm households. In our own analysis, we build the total core market revenue and fitness membership subscriptions (aligned with the market launches that Peloton is executing against). Our current financial forecast has Peloton rising to 9.4% penetration of this market opportunity. This assumption could prove to be conservative if Peloton expands its market opportunity via new geographic and product category launches. With its last earnings result, Peloton mgmt announced a price cut of ~20% on its core bike to $1,495 (monthly financing of $39/month). We expect this price cut to remain a key investor debate in the short-term as operating performance is likely to determine whether it is perceived as offensive or defensive. Mgmt has reiterated that the pricing decision is offensive and aimed at the goal of increasing accessibility of the Peloton platform.

Exhibit 205: Peloton Total Addressable Market

	2019	2020	2021E	2022E	2023E	2024E	2025E	2026E
Total Core Market Revenue ($bn)	***43.3***	***53.0***	***59.6***	***63.2***	***66.9***	***70.8***	***74.8***	***79.1***
Total Core Market Fitness Memberships (mn)	***81.0***	***96.5***	***104.6***	***108.5***	***112.4***	***116.4***	***120.5***	***124.7***
GSe Core Peloton Subscribers (000)	**511**	**1,091**	**2,331**	**3,626**	**5,121**	**7,016**	**9,211**	**11,706**
% Penetration of Launched mkt fitness subs	*0.6%*	*1.1%*	*2.2%*	*3.3%*	*4.6%*	*6.0%*	*7.6%*	*9.4%*

Source: Company data, Goldman Sachs Global Investment Research, IHRSA

Exhibit 206: Peloton's Current Portfolio



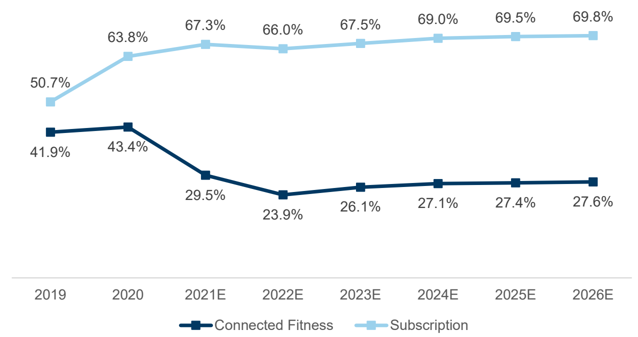
Source: Company data, Goldman Sachs Global Investment Research

Key Debate #2: Can PTON achieve 15%+ Adj EBITDA margins in 2026?

Our view – Likely. As Peloton's subscription revenue base builds and its return on marketing spend scales (especially as the company is increasingly viewed as brand synonymous with the category), we see Peloton's margins progressing toward 15%+ in 2026. Over the short-term, we see the company's forward commentary for a margin retreat in FY 22 as inline with a post-pandemic environment (return of marketing, new product launches, content initiatives & manufacturing capacity). Dating back to its IPO transaction, Peloton mgmt has always emphasized platform growth over short-term margin optimization. While the pandemic period produced outsized margins, we don't see this as mgmt's focus and their most recent FY margin commentary on the last earnings call aligns with that. Peloton mgmt highlighted that seasonality, recalls, and product innovations will impact margins, with expectations for significant operating leverage in the 2H of FY22. On product mix, we see the introduction of lower priced products and product price cuts as headwinds to margins but mgmt seems optimistic that the tradeoff (compared to driving growth and addressable market) is a positive in their analysis. This is yet another layer to the investor debates that are likely to persist as we progress through FY 22. One other point in terms of short-term margin headwinds is

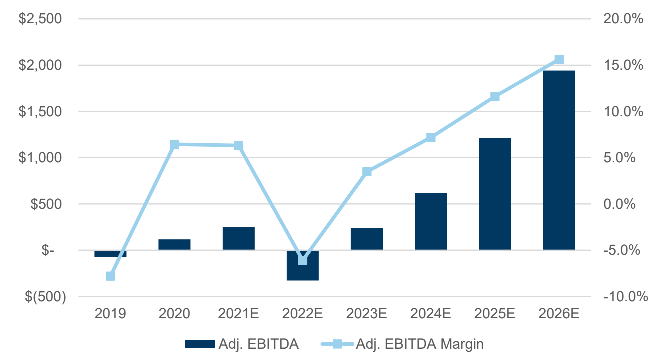
Peloton mgmt calling out inflationary costs pressure around steel, semis, & freight rates. One element of Peloton's business model that we continue to monitor is how the company scales its manufacturing capacity when measured against a mix of mgmt execution and addressable market sizing.

Exhibit 207: Peloton Connected Fitness & Subscription Adj. Gross Margin
%, FY '19 - FY '26



Source: Company data, Goldman Sachs Global Investment Research

Exhibit 208: Peloton Adj. EBITDA & Margin
$mm, FY '19 - FY '26



Source: Company data, Goldman Sachs Global Investment Research

Key Debate #3: Will Peloton expand into new geographies and new product categories in the coming years?

Our view – Likely. In the last few years, Peloton has launched new country initiatives in UK, Germany & Australia – and we believe other countries in LatAm & Western Europe are potential candidates for geographic expansion where gym membership rates and household income could align with Peloton's brand as a force for end market disruption. Press reports have indicated that Peloton may launch a rowing product in the coming year and Peloton mgmt comments (as recently as their last earnings call) continue to emphasize the strength category. Management has indicated that strength training at home is larger than cardio while data from Statista indicates that wholesale sales of rowing machines to consumers was ~$135mm in the US in 2020. In addition, we see recent initiatives around corporate wellness and commercial partnerships as potential new user funnel additive in the coming years. The company's Precor acquisition gives it exposure to gym/hotel commercial relationships that can now be levered to extend Peloton's product suite into those environments. Lastly, recent partnership announcements (e.g., Corporate Wellness partnerships with Wayfair, Samsung, SAP, Accenture Interactive, & Sky in the UK and UnitedHealthcare partnership) are additional avenues where partners could aid in driving subscription growth (both connected fitness and digital). To the contrary, we do expect the competitive environment for personal fitness platforms (gyms, digital content, health trackers, etc.) to remain robust in the coming years and any impact from competition could hamper growth and/or margins. While a debate will remain in the short-term, there seems little argument that the Bike price cut now positions Peloton as both the scaled platform and price leader in the market.

Exhibit 209: Competitive Landscape

Core Bike Competitors	
Peloton Bike	$1,495
Beachbody MYX II	$1,599
NordicTrack S22i	$1,999
Echelon Connect Bike EX-5s	$2,000
Nautilus VeloCore Bike	$2,199
SoulCycle Bike	$2,500

Broad Competitors	
Icon	Mirror
Life Fitness	Orange Theory
Nautilus	F45
Echelon	Cross Fit
Tonal	Barry's
Tempo	Hydrow

Peloton's Current Products	
Digital Subscription	$12.99/mth
Bike	$1,495
Bike+	$2,495
Tread	$2,495
Tread+	$4,295

Source: Company data, Goldman Sachs Global Investment Research

GS Estimates vs. Consensus

Exhibit 210: Peloton GS Estimates vs. Consensus

$mm except per share data

	1FQ 2022			2022			2023		
	GS Est	Cons Est	% GS vs. Cons	GS Est	Cons Est	% GS vs. Cons	GS Est	Cons Est	% GS vs. Cons
Total Revenue	$ 802	$ 808	-1%	$ 5,400	$ 5,358	1%	$ 6,927	$ 6,912	0%
Connected Fitness subscribers	2.474	2.476	0%	3.626	3.645	-1%	5.121	5.058	1%
GAAP Gross Profit	$ 264	$ 271	-3%	$ 1,837	$ 1,850	-1%	$ 2,639	$ 2,810	-6%
GAAP Gross Margin	32.9%	33.5%	-61bps	34.0%	34.5%	-50bps	38.1%	40.7%	-256bps
Adj. EBITDA	$ (286)	$ (249)	-15%	$ (328)	$ (267)	-23%	$ 241	$ 329	-27%
Adj. EBITDA Margin	-35.6%	-30.8%	-480bps	-6.1%	-5.0%	-110bps	3.5%	4.8%	-127bps
GAAP EPS	$ (1.24)	$ (1.10)	-13%	$ (2.38)	$ (2.18)	-9%	$ (0.75)	$ (0.58)	-29%

Source: Company data, Goldman Sachs Global Investment Research, FactSet

Valuation & Risk/Reward Framework

Referencing our broader valuation framework, we apply the two-pronged approach for growth companies (~20%+ revenue growth in the forward 2-3 years) to our PTON price target. Our $110 price target is based on an equal blend of: (1) EV/Sales applied to our 2023 estimates and; (2) a modified DCF using an EV/GAAP EBITDA multiple applied to our 2026 estimates discounted back 3 years. Specifically:

- 5.5x EV/Sales (or 0.18x EV/Sales-to-growth) applied to our FY23 estimates. This compares to a comp set of digital marketplace and hardware peers that have historically traded in a +/- 1 standard deviation range of 3.5x-6.0x EV/Sales on an absolute basis (or 0.10x-0.63x on an EV/Sales-to-Growth basis).
- 40.0x EV/GAAP EBITDA multiple applied to our FY26 estimates discounted back 3 years at 12%. The discount rate represents CAPM using the blended average of companies within our coverage universe consisting of: (1) 3% risk free rate (based on the normalized 10-year rate); (2) average beta of ~1.3; (3) equity risk premium of 7%.

Exhibit 211: PTON Price Target Analysis
$mm except per share data

Scenario Analysis	Downside	Base	Upside
Valuation	$ 56	$ 110	$ 159
% upside/downside	-42%	14%	65%
Sales (FY22E)	$ 4,860	$ 5,400	$ 5,940
Downside/Upside Adjustment	-10%	-	10%
Sales (FY23E)	$ 6,095	$ 6,927	$ 7,758
Downside/Upside Adjustment	-12%	-	12%
EV / 2023 Sales	4.0x	5.5x	7.0x
Sales CAGR ('21-'23)	23%	31%	39%
EV / Sales to Growth	0.17x	0.18x	0.18x
Enterprise Value	$ 24,382	$ 38,096	$ 54,305
GAAP EBITDA (FY26E)	$ 1,119	$ 1,387	$ 1,554
GAAP EBITDA Margin %	9.0%	11.2%	12.5%
EV / 2026 GAAP EBITDA	20.0x	40.0x	50.0x
GAAP EBITDA CAGR ('23-'26)	-321.7%	-338.1%	-347.3%
EV / GAAP EBITDA-to-Growth	-0.1x	-0.1x	-0.1x
Discount Rate	15.0%	12.0%	10.0%
Discount Period (Years)	3	3	3
Enterprise Value (2025)	$ 22,375	$ 55,463	$ 77,691
Discounted Enterprise Value (2022)	$ 14,712	$ 39,477	$ 58,370
Weighting			
EV derived from Sales	50%	50%	50%
EV derived from GAAP EBITDA	50%	50%	50%
Enterprise Value	$ 19,547	$ 38,787	$ 56,337
Capital Structure Adjustments			
Adjusted Net Debt - 2022E	$ (326)	$ (326)	$ (326)
Shares Outstanding - 2022E	356	356	356

Source: Company data, Goldman Sachs Global Investment Research

Key Risks

Risks to our Neutral rating include:

- Scale of product innovation that drives new use categories resulting in elements of platform scale and new user growth trajectories;
- Outcomes of the company's manufacturing and logistics capabilities in forward years';
- The industry competitive dynamic;
- Margins structure as an output of product mix, product sales growth, marketing RoI & elements of scale; &
- Broader macro slowdown that impacts consumer spending power.

In addition, Peloton is exposed to the volatility caused by the global macroeconomic environment & investor risk appetite for growth stocks.

Company Description

Peloton is an interactive fitness platform that provides instructor-led fitness classes to its members online through touch screens on its connected fitness products, which to date include the Peloton Bike & Bike+ and Peloton Tread. The company operates a comprehensive hardware supply chain; from sourcing components and contracting with manufacturers to an in-house logistics footprint that includes fulfillment, delivery, set-up, in-home service, and returns. In addition to fitness product sales, Peloton generates revenue from a monthly subscription attached to the connected fitness product that provides users with unlimited access to all live and on-demand classes. Peloton also offers a digital-only subscription for $12.99/month, which gives users without a connected fitness product access to Peloton's content on other devices. For those already with a connected fitness subscription, the digital offering is included.

Airbnb (ABNB, Sell, $132 PT): Driving Industry Innovation in Uncertain Times But What's Priced In?

Investment View

We are initiating coverage of Airbnb with a Sell rating and a 12-month price target of $132, which implies ~20% downside vs. ~10% average upside for our coverage. Airbnb is the leader in the alternative accommodations segment of travel and an emerging leader in broader global online travel. In terms of its industry positioning and levels of innovation, we find the company to be a strong player with runway for growth and margin expansion in the coming years. In addition, they are currently benefiting from a strong industry rebound in the segment of global travel in which it leads. Our Sell rating is a reflection of the stock's negative risk/reward skew from current levels when measured against the potential for a volatile travel environment ahead, a relatively mature end market (in terms of the broader online travel industry's penetration), what's implied for Airbnb growth (and alternative accommodations share of lodging demand) over the medium-to-long term & high levels of competitive intensity among industry players. In addition, our forward estimates are broadly below current Street estimates.

In this initiation, we frame the Airbnb investment case around three key debates: **1) Can Airbnb continue to outgrow the overall online travel industry in the next 5 years?** Our view – Yes. We do see alternative accommodations taking share of overall lodging supply/demand and being supportive of Airbnb growth. However, we believe Airbnb's current EV implies an industry size over the medium-to-long term that is pricing in little room for growth deviating from the current trend; **2) Will Airbnb achieve its long-term Adj. EBITDA margin goals of 30%+?** Our view – Yes. We model Adj. EBITDA margins increasing over our 5-year forecast period as a result of scale benefits and efficiencies; & **3) Can a mix of product innovation and changed travel trends produce a "new normal" for the online travel industry?** Our view – Work in Progress. While management has expressed a high degree of conviction in a "new normal" for post-COVID travel related to work/life flexibility, we are not yet convinced of that outcome having a high probability vs. what appears to be high levels of conviction being priced in at current levels.

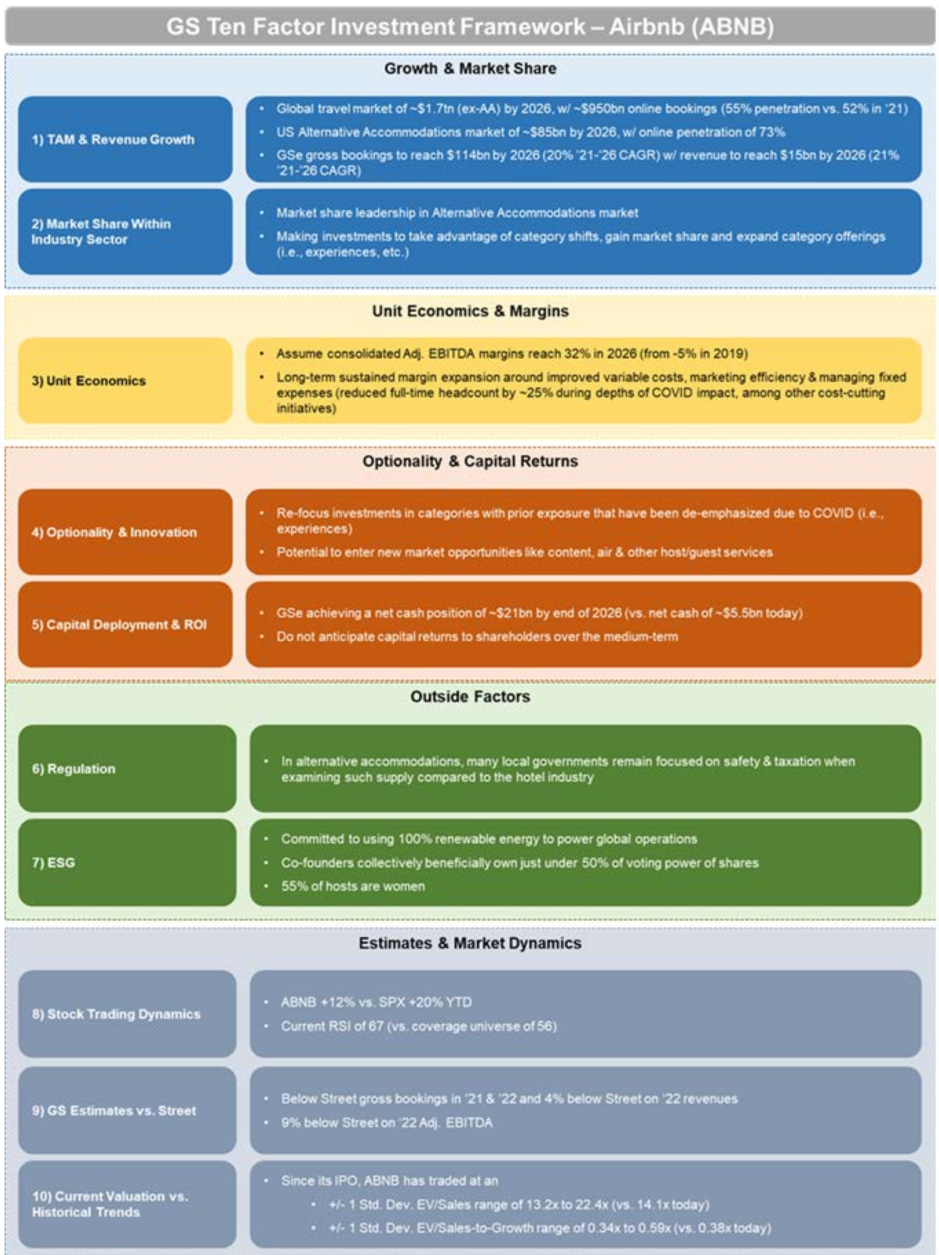
We see Airbnb generating a '21-'26 revenue CAGR of 21%, a 2026 Adj. EBITDA margin of 32% (vs. -5% in 2019) & a 2026 GAAP EBITDA margin of 19% (vs. -8% in 2019). ABNB trades at a premium multiple (on both an absolute and growth adjusted basis) vs. both its online travel and digital marketplace peers, implying a compounding revenue growth and margin expansion story that we see as already priced into shares at this level. In the short term, we see the key stock debate being the shape/linearity of the online travel recovery post pandemic & stickiness of consumer shifts in travel preferences.

GS Internet Investing Framework

Airbnb screens with mixed results as we apply the key themes and tenets of our

Goldman Sachs Internet Investing Framework. On the positive side: a) Airbnb is going to grow above broader online travel trend growth, has a rising margin profile & is investing in an innovative way against shifting demand trends within a large end market. We are less constructive about the company operating in a relatively mature end market, as measured by online penetration of total lodging, compared to its Internet peers (despite shifting supply preferences) with high levels of competitive intensity among industry players. In addition, our forward operating estimates are slightly below Street estimates, ABNB's stock performance has been strong since its 2019 IPO pricing and ABNB trades at a premium multiple (on both an absolute and growth adjusted basis) vs. peers. Our industry analysis & idiosyncratic fundamental work supports our long-term thesis.

Exhibit 212: Ten Factor Investment Framework - Airbnb (ABNB)



Source: FactSet, Company data, Goldman Sachs Global Investment Research

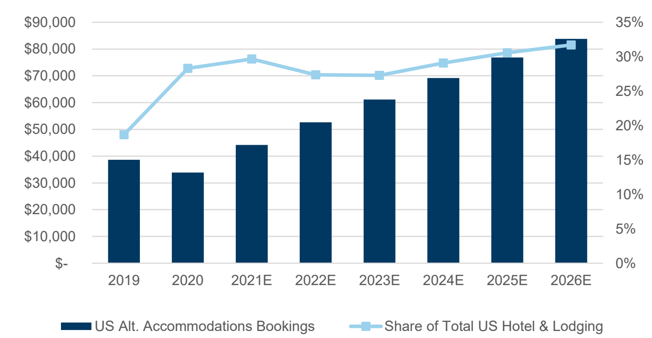
Three Key Debates & Our View

Key Debate #1: Can Airbnb continue to outgrow the overall online travel industry in the next 5 years?

Our view – Yes. We do see alternative accommodations taking share of overall lodging supply/demand and is supportive of Airbnb growth. However, we believe Airbnb's current EV implies an industry size over the medium-to-long term that is pricing in little room for growth deviating from the current trend.

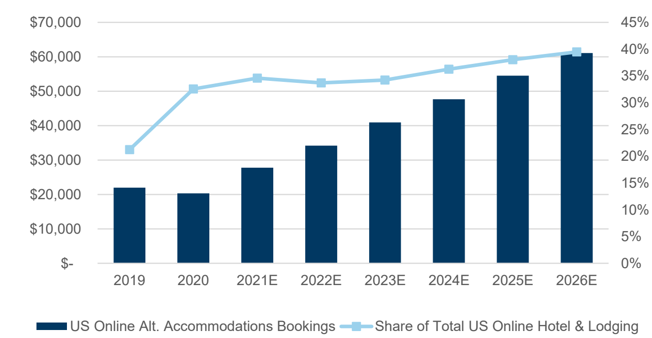
We expect the size of the global travel industry to reach ~$1.7tn by 2026 (ex-alternative accommodations), of which online travel bookings will represent ~$950bn or ~55% market share (from ~48% in 2019) (Exhibit 69). By region, we expect growth rates for online bookings in APAC & LatAm to outpace the US and Europe (Exhibit 76) as penetration levels gradually converge with more mature online travel regions of the world. We see alternative accommodations continuing to increase market share within the broader online lodging market (& in the broader travel sector). In 2020, the travel industry saw a demonstrable shift from traditional hotel stays to alternative accommodations as the pandemic's impact on remote work and longer duration stays (that combined work and secondary locations) became a larger portion of the industry's mix. What remains uncertain is how permanent that shift will be (in terms of rate of change from here) and what market share dynamics in the segment will look like in the coming years. With alternative accommodations supply constrained against demand in 2020 & 1H21, we see some industry players trying to innovate around supply sourcing/management. As it relates to alternative accommodations in the US, we expect total bookings to grow from ~$40bn in 2019 to ~$85bn in 2026, with online bookings growing penetration from ~57% to ~73% over the same time. On a longer term view, we see alternative accommodations reaching ~40% market share of total US online lodging in 2026 (vs. ~35% in 2021).

Exhibit 213: Total US Alternative Accommodations Bookings
$mm, '19-'26



Source: Phocuswright, Goldman Sachs Global Investment Research

Exhibit 214: US Online Alternative Accommodations Bookings
$mm, '19-'26



Source: Phocuswright, Goldman Sachs Global Investment Research

That said, we believe Airbnb's current valuation implies gross bookings ~50% above our estimates by 2026 (or ~$170bn), leaving little margin of safety if growth deviates from its current trend. Specifically, applying 1x 2026 gross bookings (midpoint of historical EV/GMV +/- 1 std. dev. range of 0.6x-1.4x for digital marketplace businesses) of ~$170bn and discounting back 4 years at a 12% rate, results in Airbnb's current EV of ~$110bn. Assuming Airbnb has ~50% market share, this implies alternative accommodations as a segment will account for ~35-40% of global lodging gross bookings and ~50-55% of global online lodging bookings in the 2024-2026 time period (vs. our estimate of ~35% of US online lodging bookings today and ~20% pre-COVID). Below we provide an illustrative scenario analysis flexing the assumed multiple and Airbnb market share. This results in a range of outcomes for the size of Airbnb's business in 2026 of ~$125bn at the low end and ~$290bn at the high end. This also results in a range for the size of the global alternative accommodations market as a percent of total lodging bookings implied by Airbnb's current valuation of 29% at the low end & 53% at the high end.

Exhibit 215: Scenario Analysis - Global Alternative Accommodations Market as % of Total Lodging Bookings Implied by ABNB Current Valuation

		EV/Gross Bookings				
		0.6x	0.8x	1.0x	1.2x	1.4x
ABNB Market Share	46%	53%	45%	40%	36%	32%
	48%	51%	44%	39%	35%	31%
	50%	50%	43%	38%	34%	30%
	52%	49%	42%	37%	33%	30%
	54%	49%	41%	36%	32%	29%

Source: FactSet, Company data, Goldman Sachs Global Investment Research, Phocuswright

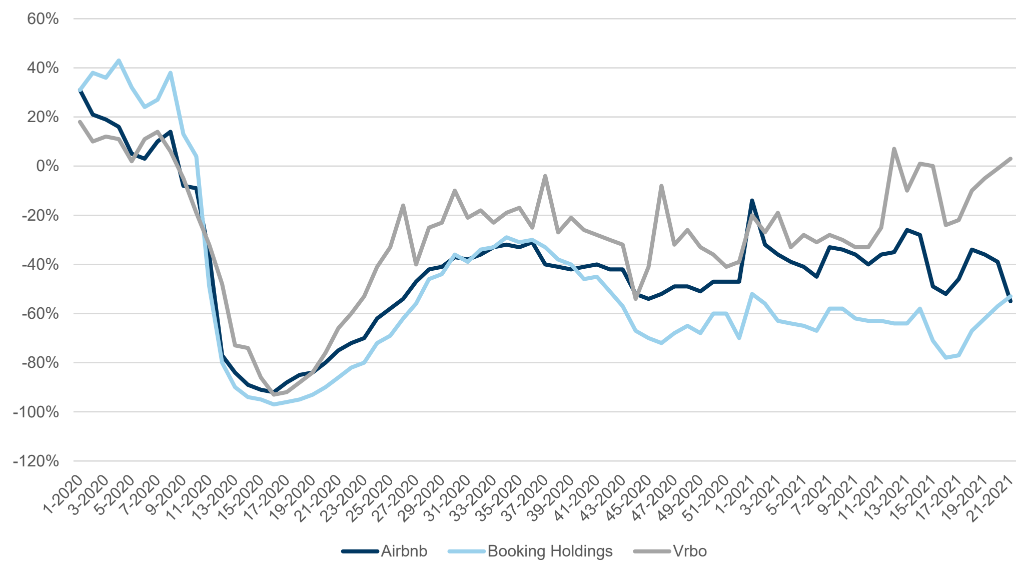
Exhibit 216: Scenario Analysis - Global Alternative Accommodations Market as % of Total Online Lodging Bookings Implied by ABNB Current Valuation

		EV/Gross Bookings				
		0.6x	0.8x	1.0x	1.2x	1.4x
ABNB Market Share	46%	53%	45%	40%	36%	32%
	48%	51%	44%	39%	35%	31%
	50%	50%	43%	38%	34%	30%
	52%	49%	42%	37%	33%	30%
	54%	49%	41%	36%	32%	29%

Source: FactSet, Company data, Goldman Sachs Global Investment Research, Phocuswright

While Airbnb is the market leader (we estimate Airbnb was 3x the size of Expedia's Vrbo brand & 2x the size of Booking's alternative accommodation business in 2019), both Booking & Expedia have been investing to grow in this sub-segment of travel. Further, Vrbo's positioning in the alternative accommodations market (i.e., primary exposure to North America, whole home, suburban, vacation rentals) allowed it to benefit in an outsized way over the past 12-18 months given these were the areas of the market that have performed the best during COVID. We see Airbnb's short-term focus being on sourcing increasing levels of supply to meet the demand shift toward alternative accommodations.

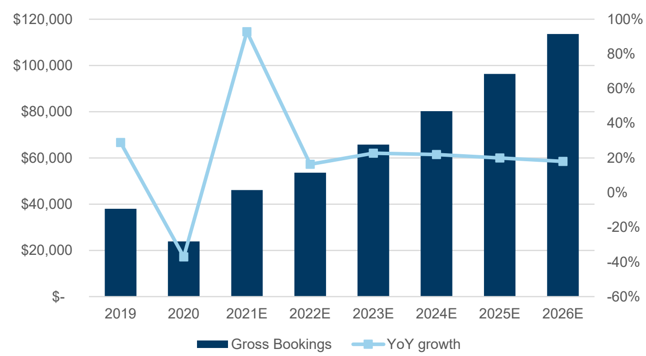
Exhibit 217: Variation of bookings per week by platform vs. 2019
weekly through 21st week of 2021 (i.e., May 2021)



Source: Transparent

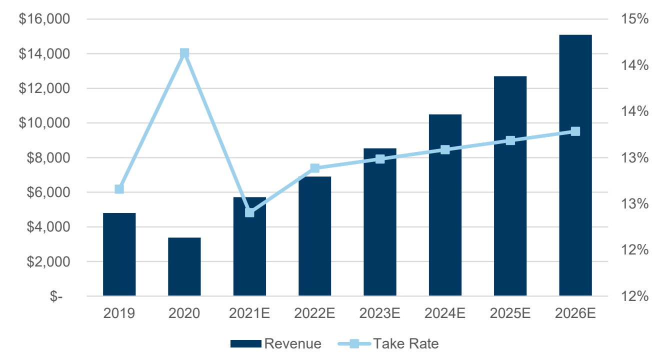
In terms of gross bookings and revenue growth, we assume Airbnb grows gross bookings from $46bn in 2021 to $114bn in 2026 (20% '21-'26 CAGR), with Nights/Experiences booked growing at a 24% CAGR and gross booking value per night/experience booked declining at a 3% CAGR over the same time (due primarily to geographic mix shift). Further, we model revenue growing from $5.7bn in 2021 to $15.1bn in 2026 (21% '21-'26 CAGR) with take rates generally stable to rising. Despite growth levels that are above industry trend, our estimates are below current Street estimates as we forecast a more normalized mix of traditional hotel room nights and alternative accommodation share in a recovered travel market (2023-2026). Further, on its most recent earnings call, Airbnb management did cite some pullback in demand (summer peak & rising concern about the Delta variant). This theme is one we are focused on for all of online travel over the short-term. The level of volatility in terms of both travel demand and the shifts among types of supply/consumer travel habits could result in high levels of volatility going forward.

Exhibit 218: Airbnb Gross Bookings
$mm, '19-'26



Source: Company data, Goldman Sachs Global Investment Research

Exhibit 219: Airbnb Revenue
$mm, '19-'26

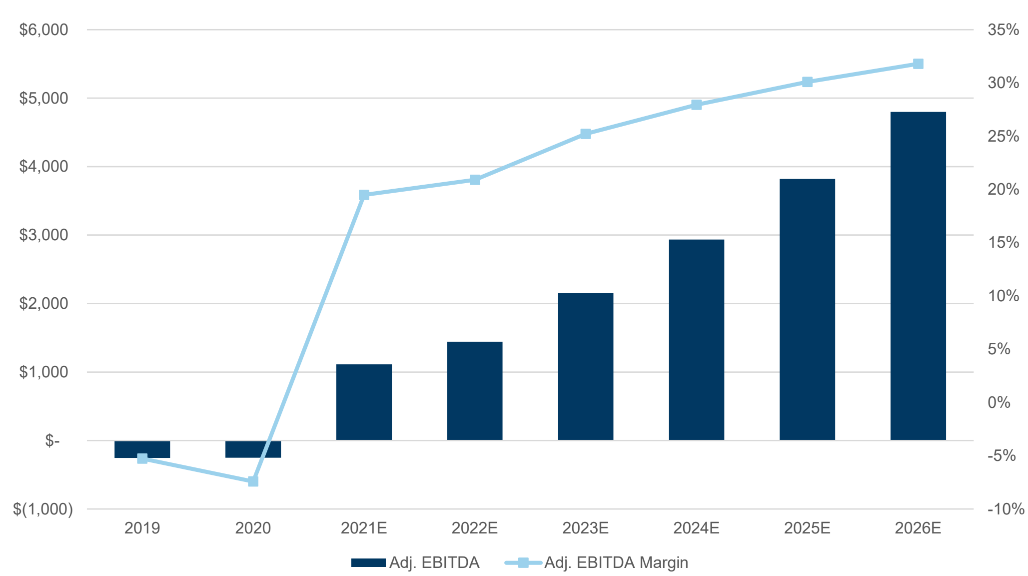


Source: Company data, Goldman Sachs Global Investment Research

Key Debate #2: Will Airbnb achieve its long-term Adj EBITDA margin goals of 30%+?

Our view – Yes. We model Adj. EBITDA margins increasing over our 5-year forecast period as a result of scale benefits and efficiencies. In examining Airbnb's long-term margin trajectory, we forecast ~32% Adj. EBITDA margins in 2026 vs. management's long-term target of 30%+. We gain confidence in this given the company has already exceeded 30% margins in 3Q20 (albeit benefiting from surge in demand related to COVID) and is expected to repeat this strength in margins in 3Q21.

Exhibit 220: Airbnb Adj. EBITDA & Margins
$mm, '19-'26



Source: Company data, Goldman Sachs Global Investment Research

Management has framed long-term sustained margin expansion around improved variable costs, marketing efficiency & managing fixed expenses (the company reduced full-time headcount by ~25% during peak COVID impact, among other cost-cutting initiatives). That being said, we continue to expect the management team to be squarely focused on product innovation driven by a founder-led mentality and its scale of engineering talent. We see growth investments aligned with a few key themes: a) elements of driving top of funnel marketing dollars (in the name of direct traffic, brand awareness & driving host supply); and b) product & category innovation/expansion (i.e., new property types, new tiers, Superhost program, HotelTonight, etc.). Another potential tailwind for margins could be a more pronounced rising take rate environment around ancillary services (guest travel insurance, promoted listings, etc.), though we don't see this as a primary focus of management today.

Further, one key topic (over the past 5 years) for the online travel industry has been the ability of industry players to lessen their dependence on paid performance marketing (with Google as the primary source), earn deeper awareness/loyalty around their brands and amplify direct traffic in order to drive growth and optimize marketing. Given it is already receiving ~90% unpaid traffic in the past few quarters, we see Airbnb as poised to possibly break the industry's dependence on paid performance channels but acknowledge that this will remain an open industry/investor debate for the short/medium term.

Airbnb currently has ~$5.5bn of net cash on its balance sheet, which we forecast to grow to ~$21bn of net cash by the end of 2026. Despite this building cash balance, we do not anticipate the company returning capital to shareholders over our forecast period. Given its growth prospects and founder-led management team driving platform/product innovation, we see the focus on growth investments over the medium term.

Key Debate #3: Can a mix of product innovation and changed travel trends produce a "new normal" for the online travel industry?

Our view – Work in Progress. While management has expressed a high degree of conviction in a "new normal" for post-COVID travel related to flexibility, we are not yet convinced of that outcome having a high probability vs. what appears to be high-levels of conviction being priced in at current levels.

In the recent past, Airbnb has framed the forward travel industry narrative around a post-COVID world where individuals: a) can travel anytime; b) travel to more places and c) can extend duration of travel stays. At its most recent event (Airbnb 2021 Release), the company introduced 100+ upgrades to refine and improve every aspect of the Airbnb service with a common theme around giving guests a more flexible experience (and resulting in better supply utilization) and reducing the friction to supply growth from Hosts (Flexible Dates, Flexible Matching, Flexible Destinations). In addition, Airbnb has achieved "noun/verb" status - an Internet investing theme that typically sustains and promotes industry leadership while capturing shifts in consumer habits. In addition, such a phenomenon also tends to bode well for marketing efficiencies as a company can benefit from greater direct web/app traffic (rather than needing to rely on paid marketing channels).

In our view, the post-COVID travel environment remains uncertain and we don't yet have the same level of conviction on themes such as flexible work (and resulting impact on travel demand). Mean reversion related to consumer spend on travel and days/duration could prove volatile to ABNB's stock. In our history with the sector, extrapolating near term trends can ignore any mean reversion related to a mix of industry norms and consumer behavior. Applying more evenly skewed probabilities to potential outcomes to end demand, product market share and incremental growth in the sector could yield a wide range of outcomes for growth and multiples (with one downside scenario where ABNB trades more like OTA peers than a growth stock over time).

Given its premium valuation, it is likely (in our view) that ABNB's stock performance from current levels will be tied to a mix of: a) the degree to which consumer/leisure travel trends in a post-COVID world permanently shift in favor of alternative accommodations; b) Airbnb remaining the leader in alternative accommodations in such an environment; c) scale benefits and efficiencies driving higher margins; & d) management continuing to innovate around sourcing supply and refining product offerings.

GS Estimates vs. Consensus

In our modeling, we are tracking 4% below Street estimates on revenue & 9% below on EBITDA in 2022. Over the near-term, debates will persist around the broader travel recovery and how sticky mix shift towards alternative accommodations will be. Over the long-term, there could be upside in our modeling of Airbnb's revenues & EBITDA should a faster recovery in global travel come to fruition (incl. more persistent share gains by alternative accommodations as a category) and/or continued best in class marketing efficiency as a result of direct bookings.

Exhibit 221: Airbnb - GS Estimates vs. Consensus
$mm

	Q3 2021			2021			2022		
	GS Est	Cons Est	% GS vs. Cons	GS Est	Cons Est	% GS vs. Cons	GS Est	Cons Est	% GS vs. Cons
Gross Bookings	$ 12,526	$ 12,291	2%	$ 46,077	$ 46,808	-2%	$ 53,586	$ 55,468	-3%
Nights/Exp. Booked	80.3	81.0	-1%	299.6	303.0	-1%	402.2	417.4	-4%
GBV per Night/Exp.	$ 156	$ 155	0%	$ 154	$ 156	-1%	$ 133	$ 131	2%
Revenue	$ 2,067	$ 2,048	1%	$ 5,716	$ 5,702	0%	$ 6,905	$ 7,172	-4%
GAAP Gross Profit	$ 1,715	$ 1,693	1%	$ 4,487	$ 4,465	1%	$ 5,445	$ 5,672	-4%
GAAP EBITDA	$ 562	$ 365	54%	$ 74	$ (173)	-143%	$ 370	$ 421	-12%
Adj. EBITDA	$ 787	$ 796	-1%	$ 1,114	$ 1,180	-6%	$ 1,444	$ 1,585	-9%
GAAP EPS	$ 0.69	$ 0.75	-9%	$ (1.54)	$ (1.26)	-22%	$ (0.06)	$ 0.55	111%

Source: FactSet, Goldman Sachs Global Investment Research

Valuation & Risk/Reward

Referencing our broader valuation framework, we apply the two-pronged approach for growth companies (~20%+ revenue growth in the forward 2-3 years) to our ABNB 12-month price target. Our $132 price target is based on an equal blend of: (1) EV/Sales applied to our 2023 estimates and; (2) a modified DCF using an EV/GAAP EBITDA multiple applied to our 2026 estimates discounted back 3 years. Specifically:

- 10.0x EV/Sales (or 0.45x EV/Sales-to-growth) applied to our FY23 estimates. This compares to a comp set of digital marketplace peers that have historically traded in a +/- 1 standard deviation range of 2.9x-5.5x EV/Sales on an absolute basis (or 0.16x-0.25x on an EV/Sales-to-Growth basis)

- 40.0x EV/GAAP EBITDA multiple applied to our FY26 estimates discounted back 3 years at 12%. The discount rate represents CAPM using the blended average of companies within our coverage universe consisting of: (1) 3% risk free rate (based on the normalized 10-year rate); (2) average beta of ~1.3; (3) equity risk premium of 7%. We'd note this implies an EV/GAAP EBITDA-to-Growth of ~1.2x on 2026 GAAP EBITDA growth, which compares to digital marketplace peers at a historical +/-1 std. dev. range of 0.8-1.0x on a one-year forward basis.

Exhibit 222: Airbnb Price Target
$mm except per share data

Scenario Analysis	Downside	Base	Upside
Valuation	$ 81	$ 132	$ 209
% upside/downside	-51%	-20%	27%
Sales (FY22E)	$ 6,214	$ 6,905	$ 7,595
Downside/Upside Adjustment	-10%	-	10%
Sales (FY23E)	$ 7,517	$ 8,542	$ 9,567
Downside/Upside Adjustment	-12%	-	12%
EV / 2023 Sales	6.0x	10.0x	14.0x
Sales CAGR ('21-'23)	14.7%	22.2%	29.4%
EV / Sales to Growth	0.41x	0.45x	0.48x
Enterprise Value	$ 45,102	$ 85,421	$ 133,940
GAAP EBITDA (FY26E)	$ 2,642	$ 2,913	$ 3,397
GAAP EBITDA Margin %	17.5%	19.3%	22.5%
EV / 2026 GAAP EBITDA	30.0x	40.0x	55.0x
GAAP EBITDA CAGR ('23-'26)	42.7%	47.4%	55.1%
EV / EBITDA-to-Growth	0.70x	0.84x	1.00x
Discount Rate	15%	12%	10%
Discount Period (Years)	3	3	3
Enterprise Value (2025)	$ 79,262	$ 116,510	$ 186,833
Discounted Enterprise Value (2022)	$ 52,116	$ 82,929	$ 140,370
Weighting			
EV derived from Sales	50%	50%	50%
EV derived from GAAP EBITDA	50%	50%	50%
Enterprise Value	$ 48,609	$ 84,175	$ 137,155
Capital Structure Adjustments			
Adjusted Net Debt - 2022E	$ (7,183)	$ (7,183)	$ (7,183)
Shares Outstanding - 2022E	692	692	692

Source: Company data, Goldman Sachs Global Investment Research

Key Risks

Risks to our Sell rating (upside for the stock) include:

- Faster recovery in travel demand (including impact from COVID variants) and accelerating adoption of alternative accommodations as a category within travel from current levels;
- Accelerating market share gains in international markets;
- Competitive intensity across the online travel funnel abating;
- Expanding categories offered on the platform (i.e., more traditional hotel inventory, experiences, etc.) and seeing strong adoption by both existing and new users.

What Could Make Us More Positive?

While we remain uncertain around what the post-COVID travel environment looks like as it relates to flexible work (and resulting impact on travel demand), we could become more positive if share gains by alternative accommodations as sub-segment of online travel are more sticky than we currently assume and/or share gains continue at an elevated pace in a post-COVID world. Further, material expansion of categories offered on the platform (i.e., more traditional hotel inventory, experiences, etc.) and seeing strong adoption by both existing and new users would also make us more positive. In both scenarios, revenue growth would likely outperform the base case in our model and result in incremental leverage due to scale benefits over the long-term.

Company Description

Airbnb operates a global alternative accommodation (short-term stay, vacation rental) marketplace, connecting hosts (offering stays and experiences) to guests through the company's platform across the web and mobile devices. Listings on the platform include private rooms, entire homes, luxury villas, treehouses, igloos, and a wide variety of experiences, in ~100k cities across the globe. Airbnb generates revenue through service fees, net of incentives and refunds, charged to both hosts and guests that are recognized upon check-in (experiences only charge a host fee).

Booking Holdings (BKNG, Neutral, $2,230 PT): Platform Evolution In The Midst Of Travel Recovery

Investment View

We are initiating coverage of Booking Holdings with a Neutral rating and a 12-month price target of $2,230. Booking is the global leader in online travel with a strong management team that is focusing its products around a "connected trip" concept. Specifically, by being able to offer multiple payments capabilities and bookable segments of travel (i.e. air, lodging, experiences/activities, car rentals, etc.) all in one, Booking is increasing the number of potential touch points with consumers and therefore looking to increase share of consumer travel budgets (i.e., higher frequency of use, potentially greater direct relationships & higher customer LTV). The company is in the midst of a strong recovery in its consumer travel business (especially in the US) but remains subject to the potential volatility of a travel recovery in 2021-2022. At the same time, management is re-positioning the company for the long-term with key investments to: a) drive market share gains in North America; b) grow alternative accommodations supply; c) build inventory/selection for its Connected Trip initiative & d) drive further adoption of its payments platform to increase growth and reduce booking friction.

In this initiation, we frame the BKNG investment case around three key debates: **1) Given end market penetration, can online travel generate mid-teens normalized revenue growth?** Our View – Work in Progress. Beyond the pronounced bookings & revenue growth we expect in 2021-2022 against easy comps, we think online penetration and competition can act as headwinds to growth in core lodging offerings with operational execution and business mix shift questions remaining on alternative accommodations and connected trip segments; **2) Will Booking's investments in shifting business mix result in returning to pre-COVID margin structure?** Our view – No. We see the company's investments as key to expanding the revenue opportunity and meeting the broader industry's competitive intensity but see newer products as structurally lower margin; & **3) Can booking amplify equity returns with investments and shareholder returns?** Our view – Yes. Examining a mix of normalized revenue, margin recovery, and incremental FCF from '21-'26 leaves the company with room to return outsized capital to shareholder in the coming years.

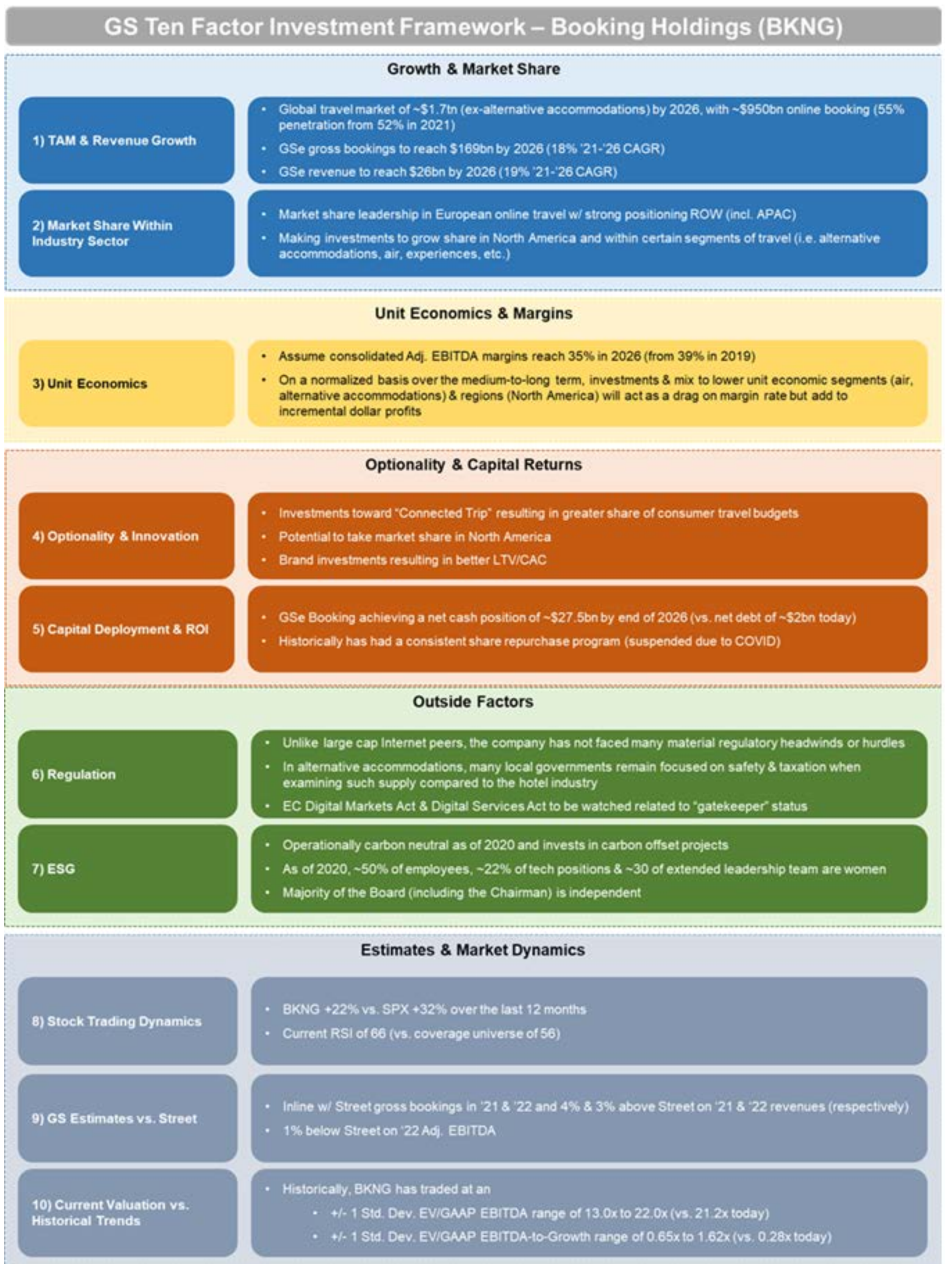
We see Booking generating a '21-'26 revenue CAGR of 19% & a 2026 GAAP EBITDA margin of 35% (compared to 39% in 2019). While recovering nicely from March 2020 until today, BKNG stock has traded mostly sideways the last 6 months. One key short-term debate will be the degree of sustainable consumer travel recovery in a normalized environment and how management aligns investments to capture more industry growth over the long-term.

GS Internet Investing Framework

Booking screens with mixed results as we apply the key themes and tenets of our

Goldman Sachs Internet Investing Framework. On the positive side: a) Booking is a sector leader with strong margins and a well-capitalized balance sheet & b) has the potential to both invest for future growth and potentially return outsized capital to shareholders in a more normalized demand environment. We are less constructive about: a) the company operates in a relatively mature end market compared to its Internet peers with a needed investment cycle that will suppress margins in the coming years & b) open questions on take rate stability and market share dynamics. Our industry & idiosyncratic fundamental work supports our long-term thesis.

Exhibit 223: Ten Factor Investment Framework - Booking Holdings (BKNG)



Source: Company data, Goldman Sachs Global Investment Research, FactSet

Three Key Debates & Our View

Key Debate #1: Given end market penetration, can online travel generate mid-teens normalized revenue growth?

Our View – Work in Progress. Beyond the pronounced bookings & revenue growth we expect in 2021-2022 against easy comps, we think online penetration and competition can act as headwinds to growth in core lodging offerings with operational execution and long-term sustainable mix shift questions remaining on alternative accommodations (as it relates to rate of change from here) and connected trip segments.

We expect the size of the global travel industry to reach ~$1.7tn by 2026 (ex-alternative accommodations), of which online travel bookings will represent ~$950bn or ~55% market share (from ~48% in 2019) (Exhibit 69). By region, we expect growth rates for online bookings in APAC & LatAm to outpace the US and Europe (Exhibit 76) as penetration levels gradually converge with more mature online travel regions of the world. We'd note Booking's regional exposure is most pronounced in Europe, but does generate business in APAC (incl. through Agoda) as well as LatAm. While we believe structural online room night growth is somewhere in the high-single-digit to low-double-digit range on a normalized basis, we still see pockets of opportunity for global OTAs to benefit from growth in less penetrated regions & segments of travel.

We continue to see leisure travel trends re-accelerating (recovering) much faster than business travel (OTAs in our coverage have minimal exposure to business travel), which we expect to lag as an indicator of the financial recovery of the overall travel industry. Further, based on our fundamental work, we see the OTAs taking incremental share of the lodging booking mix given some continued offline to online shifts and OTAs receiving the majority of alternative accommodation bookings. That said, while OTAs are typically share takers within the broader travel industry during challenging periods, we are hesitant to extrapolate this trend out over multiple years as it relates to share of online hotel bookings.

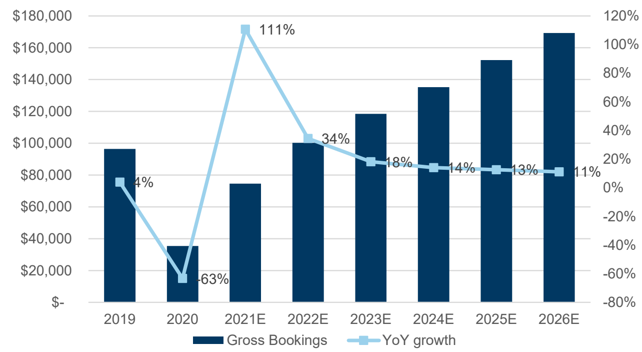
During its recent earnings call, Booking highlighted that cancellation rates are roughly inline with 2019 (Expedia struck a less constructive tone about July & recent industry news would point to more volatility in the end demand environment due to the COVID-19 Delta variant). Recent messaging from Booking management was that: a) they expect Q3 revenues to be closer to 2019 levels than the Q2 comparison; b) volatility remains in the end market environment due to travel restrictions, vaccination rates & variant driven cases; c) softer booking trends in broader Europe than UK (as UK eased restrictions mid-July); d) strong consumer travel rebound in North America; e) APAC continues to lag other regional recoveries; & f) rise in importance of alternative accommodations and the "connected trip". In particular, we see the likely biggest swing factors in terms of long-term share price performance to be related to how successful Booking is in their efforts to change the North American market share dynamic and expand the "connected trip" offering.

Booking's North American travel strategy is focused on: a) running a more localized approach (vs. what they have talked about as a unified global approach historically); 2) driving awareness of the Booking brand in North America (as opposed to the more historical reliance on Priceline); & 3) a bundled offering that adds a deeper mix of flights and packages into the consumer proposition (historically Booking had under indexed to air/flight + hotel packages than Expedia). Investors should keep in mind the impact potential geographic mix shift could have on reported financials. Specifically, air take rates/margins are significantly lower than core lodging and North America lodging take rates are generally lower than Europe (given large chain hotels have greater share in the US and have negotiated lower commission rates vs. independent/boutique hotels). Alternative accommodations will play a part in Booking's efforts to gain share in North America as well given it under-indexes in terms of supply relative to Europe.

We see alternative accommodations continuing to increase market share within the broader online lodging market (& in the broader travel sector). In 2020, the travel industry saw a demonstrable shift from traditional hotel stays to alternative accommodations as the pandemic's impact on remote work and longer duration stays (that combined work and secondary locations) became a larger portion of the industry's mix. What remains uncertain is how permanent that shift will be (in terms of rate of change from here) and what market share dynamics in the segment will look like in the coming years. With alternative accommodations supply constrained against demand in 2020 & 1H21, we see some industry players trying to innovate around supply sourcing/management. As it relates to alternative accommodations in the US, we expect total bookings to grow from ~$40bn in 2019 to ~$85bn in 2026, with online bookings growing penetration from ~57% to ~73% over the same time (Exhibit 214). On a longer term view, we see alternative accommodations reaching ~40% market share of total US online lodging in 2026 (vs. ~35% in 2021). While both Booking & Expedia (including their Vrbo brand) lag Airbnb in terms of size in this segment of the market, we see both Booking and Expedia as positively exposed to this theme. We'd note Booking has disclosed that alternative accommodations represented 32% of demand in Q2 (vs. ~29% in Q1 & ~20% pre-COVID).

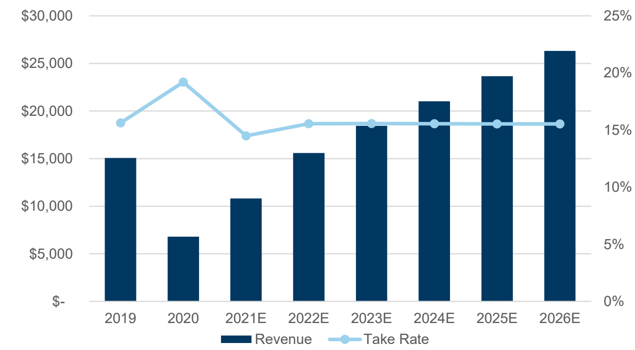
In terms of gross bookings and revenue growth, we assume Booking Holdings grows gross bookings from $75bn in 2021 to $169bn in 2026 (18% '21-'26 CAGR), with lodging still making up the vast majority of demand in the mid-80% range (vs. 90%+ in 2019). Further, we model revenue growing from $10.8bn in 2021 to $26.3bn in 2026 (19% '21-'26 CAGR) with take rates generally stable in the mid-teens on a consolidated basis, reflecting lodging & "other" (incl. rental cars, experiences, etc.) take rates in the mid-to-high teens and air take rates in the low-single digits.

Exhibit 224: Booking Gross Bookings
$mm, '19-'26



Source: Company data, Goldman Sachs Global Investment Research

Exhibit 225: Booking Revenue
$mm, '19-'26



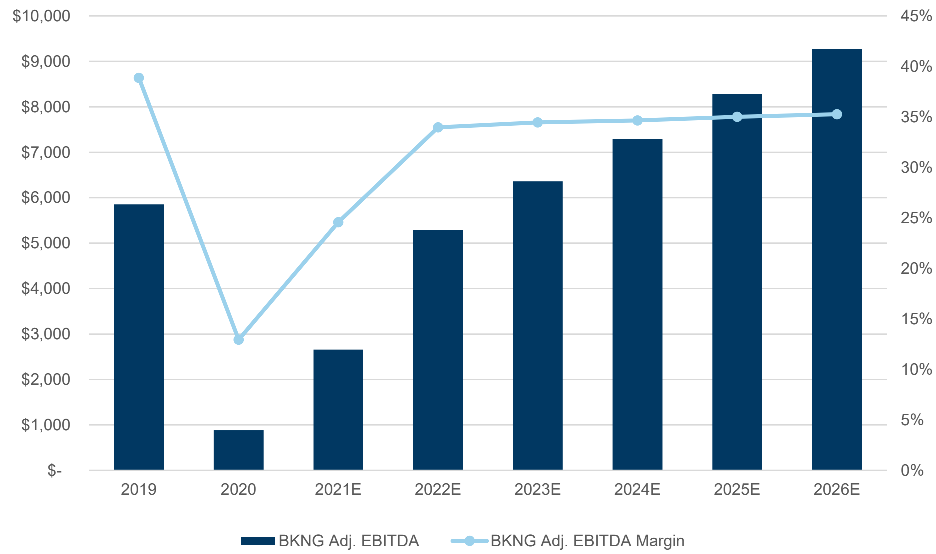
Source: Company data, Goldman Sachs Global Investment Research

Key Debate #2: Will Booking's investments in shifting business mix result in returning to pre-COVID margin structure?

Our view – No. While we see the company's investments as key to expanding the revenue opportunity and to meet broader industry competitive intensify, we see newer products as structurally lower take rate/margin. Booking management has highlighted key investment narratives against long-term growth: 1) a payments platform with an eye toward increasing conversion and gaining share of cross-border travel; 2) a push to gain market share in North America (led by packages including lower margin flights); 3) "Connected Trip"; & 4) sourcing supply and improving mix from alternative accommodations, which the company itself has flagged as lower margin than its core lodging business given incremental customer/host support.

In examining Booking's long-term margin trajectory, we see two elements emerging: 1) management has stated that investing against these long-term growth opportunities (payments, flights, local, alternative accommodation) will put pressure on operating margins & 2) while such investments are likely to be supportive of incremental dollar revenue growth, each of these businesses, products & regions generally tend to be lower take rate/margin than Booking's legacy business (skewed towards core European lodging). In our financial forecasting, we have the company achieving Adj. EBITDA margins of ~35% in 2026, below ~39% in 2019, due to those factors.

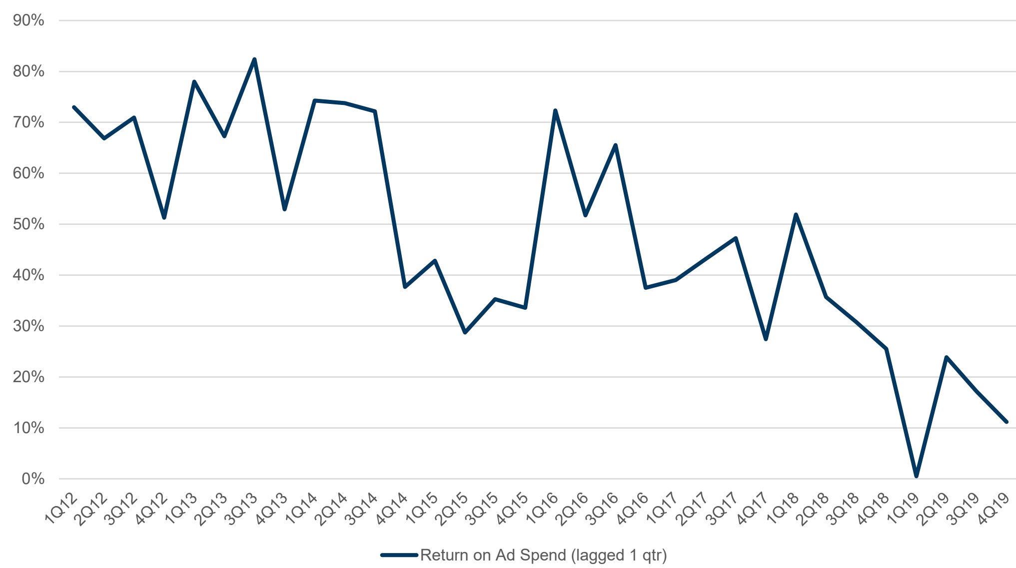
Exhibit 226: Booking Adj. EBITDA & Margins
$mm, '19-'26



Source: Company data, Goldman Sachs Global Investment Research

In addition, a key topic for the OTAs over the past 5+ years has been their dependence on paid performance marketing (Google as the main source). We note that Google, while not an OTA or booking engine, has continuously driven product innovation in the online travel space as a means to gain greater share of travel industry advertiser budgets. In response, OTAs have looked to invest in their own brands as a way to drive deeper awareness/loyalty & amplify direct traffic, generate high margin growth and optimize marketing (via higher customer LTVs). While Booking has been able to earn greater levels of marketing efficiencies on user acquisition relative to peers, we believe performance advertising spend is likely to be neutral to negative for margins over the medium-to-long term. Further, while we recognize the opportunity in creating a flywheel of more diverse supply leading to higher frequency of use and customer LTVs, we do not currently forecast rising margins as a result of this in our base case.

Exhibit 227: Online Travel Return on Ad Spend



Reflects incremental revenue divided by advertising spend (lagged one quarter) for BKNG & EXPE

Source: Company data, Goldman Sachs Global Investment Research

Key Debate #3: Can Booking amplify equity returns with investments and shareholder returns?

Our view – Yes. Examining a mix of margin recovery (from COVID lows), normalized revenue, and incremental FCF from '21-'26 leaves Booking with the ability to return outsized amounts of capital to shareholder in the coming years.

While the company's business model was under pressure from a mixture of cancellations and lack of demand at the height of the pandemic, management shored up the balance sheet by raising capital, cutting costs & halting stock buybacks. While Booking is investing heavily into its growth initiatives, we still see the company producing strong margins and FCF generation in a normalized travel market. As of 2Q21, Booking had $10.4bn remaining on its current share repurchase authorization. Given it remains suspended, we do not model the execution of this buyback in our financial model as management has stated they do not intend to initiate any repurchases until there is better visibility into the shape and timing of the demand environment normalizing. The company has ~$2bn of net debt (GS estimate) on its balance sheet as of 2Q21, which we forecast to turn to ~$27.5bn of net cash by the end of 2026. Between '22-'26, we see Booking compounding ~$30bn in aggregate FCF, which could be deployed in the form of share repurchases in the coming years. Below we provide an illustrative scenario analysis around Booking's implied PE ratio if the company were to choose to allocate 100% of annual FCF generation (less change in deferred merchant bookings) to buy back stock. Based on our analysis, Booking would be able to buy back ~30% of its current market cap.

Exhibit 228: Booking Holdings - Share Buyback Analysis
mm except per share data

	2022E	2023E	2024E	2025E	2026E
Free Cash Flow	$ 4,126	$ 5,204	$ 6,022	$ 6,900	$ 7,761
Less: Change in deferred merchant bookings	*$ 574*	*$ 389*	*$ 383*	*$ 406*	*$ 425*
Adj. Free Cash Flow	$ 3,552	$ 4,814	$ 5,639	$ 6,494	$ 7,336
% of Adj. FCF Used for Repurchases	*100%*	*100%*	*100%*	*100%*	*100%*
Total Potential Share Repurchases	$ 3,552	$ 4,814	$ 5,639	$ 6,494	$ 7,336
Stock Price*	$ 2,502	$ 2,677	$ 2,865	$ 3,065	$ 3,280
Potential Shares Repurchased	1.4	1.8	2.0	2.1	2.2
GSe Share Repurchases	$ -	$ -	$ -	$ -	$ -
Total Potential Share Repurchases	$ 3,552	$ 4,814	$ 5,639	$ 6,494	$ 7,336
GSe Avg Diluted Shares	41.5	41.7	41.9	42.0	42.2
GSe Avg Shares Repurchased	0.0	0.0	0.0	0.0	0.0
Potential Shares Repurchased	1.4	1.8	2.0	2.1	2.2
Potential Avg Diluted Shares	40.1	39.9	39.9	39.9	40.0
Implied GAAP EPS	$ 91.72	$ 113.38	$ 131.68	$ 151.94	$ 171.80
% upside vs. GS ests	*4%*	*5%*	*5%*	*5%*	*6%*
Implied PE	**25.5x**	**20.6x**	**17.8x**	**15.4x**	**13.6x**
Average Assumed Price	$ 2,917				
Total Shares Repurchased (mm)	9.54				
Total Potential Share Repurchases	$ 27,836				
% of Current Market Cap	29%				

*Assumes 7% annual appreciation; Share price as of 8/23/2021

Source: Company data, Goldman Sachs Global Investment Research

GS Estimates vs. Consensus

In our modeling, we are tracking ahead of FactSet estimates on revenue & EBITDA. Over the near-term, debates will persist around the broader travel recovery as well as investments the company is making around long-term growth initiatives. Over the long-term, there could be upside in our modeling of Booking's revenues should a faster recovery in global travel come to fruition and/or better than expected execution around the "connected trip." As it relates to EBITDA, there could be upside on an absolute dollar basis if the company's investment in brand advertising lead to greater efficiency on performance marketing spend and more direct bookings.

Exhibit 229: Booking Holdings - GS Estimates vs. Consensus
$mm

	Q3 2021			2021			2022		
	GS Est	Cons Est	% GS vs. Cons	GS Est	Cons Est	% GS vs. Cons	GS Est	Cons Est	% GS vs. Cons
Gross Bookings	$ 22,377	$ 22,285	0%	$ 74,577	$ 74,498	0%	$ 100,301	$ 99,901	0%
Revenue	$ 4,500	$ 4,261	6%	$ 10,812	$ 10,399	4%	$ 15,598	$ 15,184	3%
Agency	$ 3,004	$ 2,801	7%	$ 6,970	$ 6,599	6%	$ 9,884	$ 9,320	6%
Merchant	$ 1,317	$ 1,301	1%	$ 3,284	$ 3,206	2%	$ 4,944	$ 4,753	4%
Other	$ 180	$ 178	1%	$ 558	$ 537	4%	$ 770	$ 768	0%
GAAP EBITDA	$ 1,960	$ 1,736	13%	$ 2,657	$ 2,534	5%	$ 5,297	$ 5,444	-3%
Adj. EBITDA	$ 1,960	$ 1,758	12%	$ 2,656	$ 2,481	7%	$ 5,297	$ 5,342	-1%
GAAP EPS	$ 33.59	$ 30.70	9%	$ 40.93	$ 37.66	9%	$ 88.58	$ 92.38	-4%
Adj. EPS	$ 33.59	$ 32.18	4%	$ 38.55	$ 40.04	-4%	$ 88.58	$ 97.19	-9%

Source: FactSet, Goldman Sachs Global Investment Research

Valuation & Risk/Reward

Referencing our valuation framework, we apply the two-pronged approach for more mature companies (~20% or lower growth in the forward 2-3 years) to our Booking Holdings price target. Our $2,230 12 month price target is based on an equal blend of: (1) EV/GAAP EBITDA applied to our 2023 estimates and; (2) a modified DCF using an EV/(FCF-SBC) multiple applied to our 2026 estimates discounted back 3 years. Specifically:

- 14x EV/GAAP EBITDA (or 0.3x EV/EBITDA-to-growth) applied to our 2023 estimates. Historically, Booking has traded at an EV/GAAP EBITDA +/- 1 standard deviation range of 13x-22x on a one-year forward multiple basis (or a ratio of 0.7-1.6x when adjusted for growth). We'd note on a normalized basis we model low-double digits/mid-teens EBITDA growth, which would imply a growth adjusted multiple closer to ~1x. Further, this compares to a comp set of online travel peers that have historically traded in a +/- 1 standard deviation range of 9x-17x EV/GAAP EBITDA on an absolute basis (or 0.3x-0.8x on an EV/GAAP EBITDA-to-Growth basis).
- 17.5x EV/FCF-SBC multiple applied to our 2026 estimates discounted back 3 years at 12%. The discount rate represents CAPM using the blended average of companies within our coverage universe consisting of: (1) 3% risk free rate (based on the normalized 10-year rate); (2) average beta of ~1.3; (3) equity risk premium of 7%.

Exhibit 230: Booking Holdings Price Target
$mm except per share data

Scenario Analysis	Downside	Base	Upside
Valuation	$ 1,540	$ 2,230	$ 3,010
% upside/downside	-34%	-4%	29%
Sales (FY22E)	$ 14,350	$ 15,598	$ 16,845
Downside/Upside Adjustment	-8%	-	8%
Sales (FY23E)	$ 16,607	$ 18,452	$ 20,297
Downside/Upside Adjustment	-10%	-	10%
EV / 2023 Sales (implied)	3.6x	4.8x	6.0x
Sales CAGR ('21-'23)	23.9%	30.6%	37.0%
EV / Sales to Growth (implied)	0.15x	0.16x	0.16x
GAAP EBITDA (FY22E)	$ 4,735	$ 5,297	$ 5,896
EBITDA Margin %	33.0%	34.0%	35.0%
GAAP EBITDA (FY23E)	$ 5,314	$ 6,358	$ 7,307
EBITDA Margin %	32.0%	34.5%	36.0%
EV / 2023 EBITDA	11.0x	14.0x	17.0x
EBITDA CAGR ('21-23)	41.4%	54.7%	65.8%
EV / EBITDA to Growth	0.27x	0.26x	0.26x
Enterprise Value	$ 58,456	$ 89,011	$ 124,219
FCF-SBC (FY26E)	$ 6,315	$ 7,112	$ 7,894
FCF % of Sales	24.0%	27.0%	30.0%
EV / 2026 FCF-SBC	15.0x	17.5x	20.0x
FCF-SBC CAGR ('23-'26)	10.4%	14.9%	18.9%
EV / FCF-SBC to Growth	1.44x	1.18x	1.06x
Discount Rate	15%	12%	10%
Discount Period (Years)	3	3	3
Enterprise Value (2025)	$ 94,728	$ 124,459	$ 157,880
Discounted Enterprise Value (2022)	$ 62,285	$ 88,588	$ 118,618
Weighting			
EV derived from GAAP EBITDA	50%	50%	50%
EV derived from (FCF-SBC)	50%	50%	50%
Enterprise Value	$ 60,371	$ 88,799	$ 121,418
Capital Structure Adjustments			
Adjusted Net Debt - 2022E	$ (3,614)	$ (3,614)	$ (3,614)
Shares Outstanding - 2022E	41	41	41

Source: Company data, Goldman Sachs Global Investment Research

Key Risks

Upside and Downside risks to our Neutral rating and price target include:

- Faster/slower recovery in travel demand (including impact from COVID variants) could cause bookings & revenue growth to outperform/underperform our base case estimates;
- Market share gains in North America or market share losses in Europe could cause bookings & revenue growth to outperform/underperform our base case estimates;
- Competitive intensity increasing across the online travel funnel could cause pressure on margins as a result of the need to invest more in marketing;
- Capturing greater share of travel budgets through executing on the “connected trip” or investments related to this initiative having lower ROI and not yielding better revenue trajectory in coming years could result in bookings, revenue and Adj. EBITDA to outperform/underperform our base case estimates;
- An accelerated resumption of capital returns (or lack of capital returns for an extended period of time, even post-COVID) could act as a positive catalyst for the stock in the future (or act as an overhang).

Company Description

Booking Holdings is an online travel company operating a number of brands, including Booking.com, Priceline, Agoda, Rentalcars.com, KAYAK and OpenTable. Across its platforms consumers can book accommodations, reserve cars or make taxi arrangements, make dining reservations, flight tickets, cruises, vacation packages, tours or activities. Other services offered include metasearch (KAYAK), travel insurance and restaurant management services. The company primarily generates revenue based on a commission rate applied to the total booking amount of the travel reservation, as well as through credit card processing rebates and customer processing fees, advertising services, restaurant reservations and restaurant management services, and various other services, such as travel-related insurance revenues.

Expedia (EXPE, Buy, $185 PT): Expanding Margin Narrative as Industry Recovers

Investment View

We are initiating coverage of Expedia with a Buy rating and a 12-month price target of $185. Expedia is the leader in North American online travel and a #2 player in many markets globally through a stable of brands it operates, including Expedia, Hotels.com, Expedia Partner Solutions, Vrbo, Egencia, trivago, Orbitz, Travelocity, Hotwire & Wotif, among others. Even before COVID-19 caused disruption to the company's business model, the new management team was focused on driving greater levels of efficiencies (costs savings, more streamlined spend and better RoI) through an initiative that began when the change took place in December 2019. We think a mix of stable normalized growth, rising margins as an output of such efforts (resulting in structurally higher margins) and the potential for shareholder returns in a normalized travel environment make EXPE a compelling risk/reward from current levels. Expedia is in the midst of a strong recovery in its consumer travel business (especially in the US) but remains subject to the potential volatility of a travel recovery in 2021-2022.

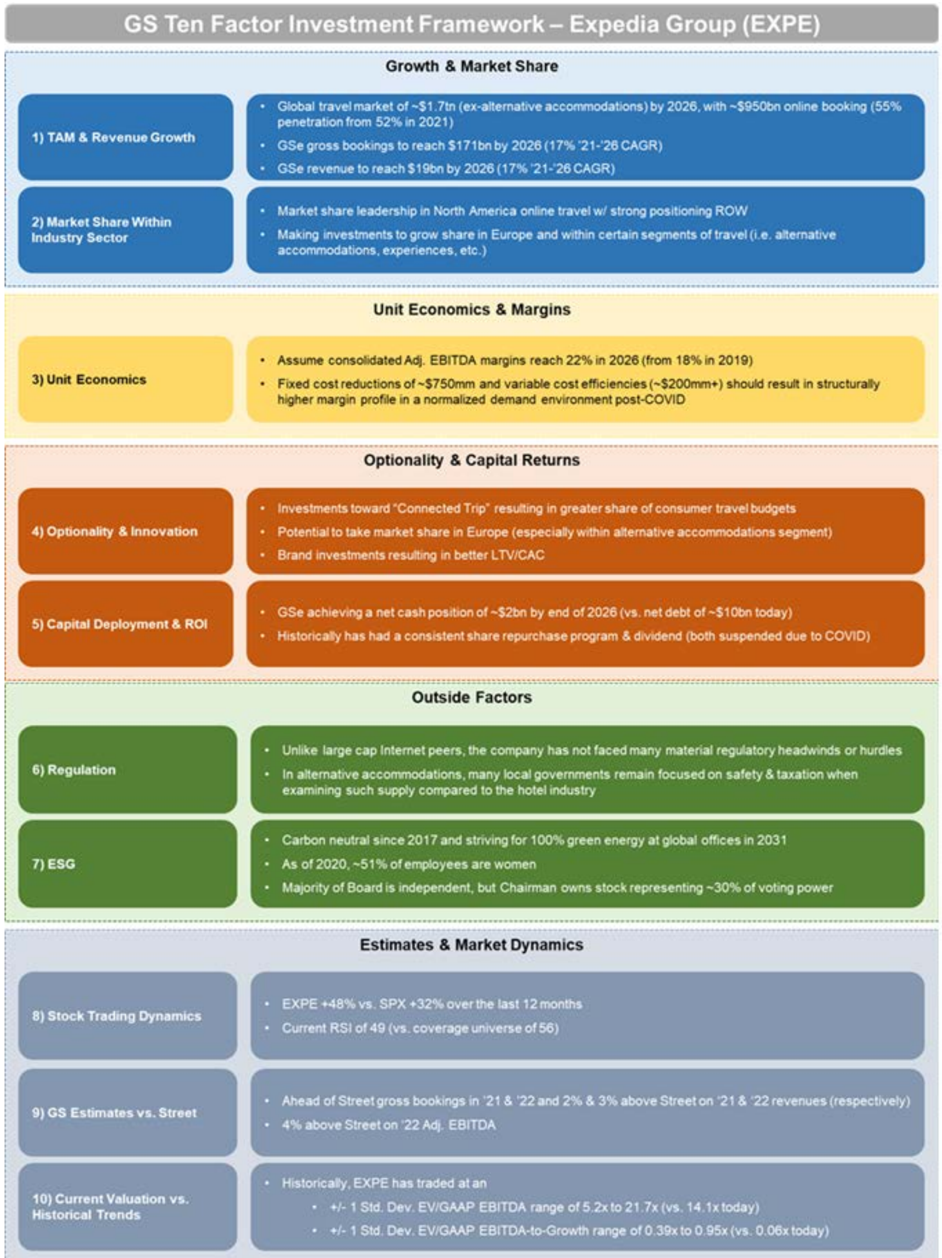
In this initiation, we frame the EXPE investment case around three key debates: **1) Given end market penetration, can online travel generate mid-teens normalized revenue growth?** Our View – Work in Progress. Beyond the pronounced gross bookings & revenue growth we expect in the 2021-2022 timeframe against the easy comps, we think online penetration and competition can act as headwinds to growth in core lodging offerings with operational execution and business mix shift questions remaining on alternative accommodations and potential for growth in underpenetrated & more fragmented sub-segments of travel; **2) Will Expedia's efficiency initiatives and investments to align the business for growth produce a rising margin narrative in 2022-2024?** Our View – Yes. We see Expedia driving Adj. EBITDA margins from 2019 levels of ~18% to ~22% in 2023 on the back of pulling ~$750mm of fixed costs from the business as well as another potential bucket of $200mm of variable cost efficiencies; & **3) Can Expedia amplify equity returns with shareholder returns?** Our view – Yes. As COVID began impacting the travel industry, the company has made strategic moves to re-position its asset portfolio & brands around consumer travel (hotel, alternative accommodation) and disposed of businesses not in its core focus. When examining its balance sheet and FCF generation potential, we see Expedia with an ability to return outsized capital to shareholders in the coming years.

We see Expedia generating a '21-'26 revenue CAGR of 17% & a 2026 GAAP EBITDA margin of ~19% (compared to ~15% in 2019). While recovering nicely from March 2020 until today, EXPE stock has underperformed in the last 3-6 months. One key short-term debate will be the degree of sustainable consumer travel recovery in a normalized environment and how Expedia is positioned (compared to its closest peers) to capture industry growth & market share over the long-term.

GS Internet Investing Framework

Expedia screens with modestly positive results as we apply the key themes and tenets of our Goldman Sachs Internet Investing Framework. On the positive, they a) are a sector leader in North America online travel, b) show a rising margin structure due to management actions, & c) have a well-capitalized balance sheet with the potential to both invest for future growth as well as potentially return outsized capital to shareholders in a more normalized end market environment. On the less constructive side, they a) operate in a relatively mature end market compared to its Internet peers & b) that end market will remain with a high level competitive intensity in the years ahead. Our operating estimates are slightly ahead of FactSet estimates & EXPE's stock performance has been mixed (strong recovery from March 2020 but has underperformed lately). Our industry analysis & idiosyncratic fundamental work supports our long-term thesis.

Exhibit 231: Ten Factor Investment Framework - Expedia Group (EXPE)



Source: FactSet, Company data, Goldman Sachs Global Investment Research

Three Key Debates & Our View

Key Debate #1: Given end market penetration, can online travel generate mid-teens normalized revenue growth?

Our View – Work in Progress. Beyond the pronounced revenue growth we expect in 2021-2022 against easy comps, we think online penetration and competition can act as headwinds to growth in core lodging offerings with operational execution and business mix shift questions remaining on alternative accommodations and potential for growth in under penetrated & more fragmented sub-segments of travel.

We expect the size of the global travel industry to reach ~$1.7tn by 2026 (ex-alternative accommodations), of which online travel bookings will represent ~$950bn or ~55% market share (from ~48% in 2019) (Exhibit 69). By region, we expect growth rates for online bookings in APAC & LatAm to outpace the US and Europe (Exhibit 76) as penetration levels gradually converge with more mature online travel regions of the world. Expedia is the leader in North American online travel and has been making progress in Europe, APAC & LatAm over the past few years. While we believe structural online room night growth is somewhere in the high-single-digit to low-double-digit range on a normalized basis, we still see pockets of opportunity for global OTAs to benefit from growth in less penetrated regions & segments of travel.

We continue to see leisure travel trends recovering much faster than business travel (OTAs in our coverage have minimal exposure to business travel), which we expect to lag as an indicator of the financial recovery of the overall travel industry. Further, based on our fundamental work, we see the OTAs taking incremental share of the lodging booking mix given some continued offline to online shifts and OTAs receiving the majority of alternative accommodation bookings. That said, while OTAs are typically share takers within the broader travel industry during challenging periods, we are hesitant to extrapolate this trend out over multiple years as it relates to share of online hotel bookings.

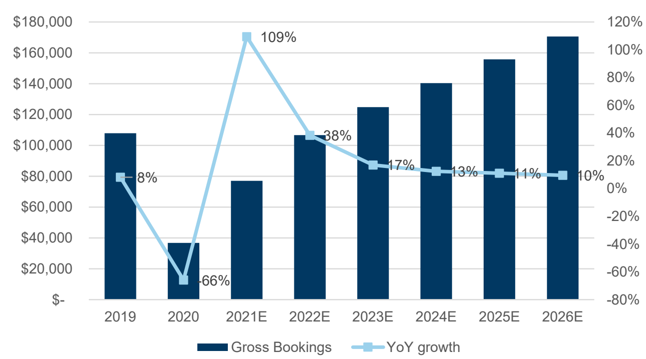
We see alternative accommodations continuing to increase market share within the broader online lodging market (& in the broader travel sector). In 2020, the travel industry saw a demonstrable shift from traditional hotel stays to alternative accommodations as the pandemic's impact on remote work and longer duration stays (that combined work and secondary locations) became a larger portion of the industry's mix. What remains uncertain is how permanent that shift will be (in terms of rate of change from here) and what market share dynamics in the segment will look like in the coming years. With alternative accommodations supply constrained against demand in 2020 & 1H21, we see some industry players trying to innovate around supply sourcing/management. As it relates to alternative accommodations in the US, we expect total bookings to grow from ~$40bn in 2019 to ~$85bn in 2026, with online bookings growing penetration from ~57% to ~73% over the same time (Exhibit 214). On a longer term view, we see alternative accommodations reaching ~40% market share of total US online lodging in 2026 (vs. ~35% in 2021). While both Booking & Expedia (including their Vrbo brand) lag Airbnb in terms of size in this segment of the market, we see both Booking and Expedia as positively exposed to this theme. Expedia has exposure to this theme through its Vrbo brand but a rebranding at that unit in 2019 (related to legacy HomeAway) left Vrbo donating market share in certain pre-COVID periods, but has been able to participate in the pronounced alternative accommodation recovery. Specifically, Vrbo's positioning in the alternative accommodations market (i.e. primary exposure to North America, whole home, suburban, vacation rentals) allowed it to benefit in an outsized way given those were the areas of the market that have performed the best during COVID (Exhibit 217). We'd note Expedia has previously disclosed Vrbo as a separate segment and had gross bookings of ~$12bn in 2019.

On the back of its pre-COVID business reorganization, Expedia has been consistent in its long-term messaging related to simplifying the business in order to execute against growth opportunities more quickly. Two examples of this focus include operating its multi-brand portfolio more efficiently & exiting certain non-core assets. Going forward, management is looking to have better marketing coordination among its focus brands (including how various brands compete against each other globally), marketing optimization for direct traffic & RoI and rationalizing its tech stack (recently brought in a new CTO).

On more recent trends, Expedia struck a less constructive tone about July on its Q2 earnings call & recent industry news would point to more volatility in the end demand environment due to the COVID-19 Delta variant. We expect this dynamic to be the biggest near-term factor that could cause volatility in revenue growth and stock performance. Over the long-term, we see Expedia's ability to navigate a rising competitive dynamic as a key variable for stock performance given Booking has announced its own initiative to take share in the North American travel market through its connected trip effort.

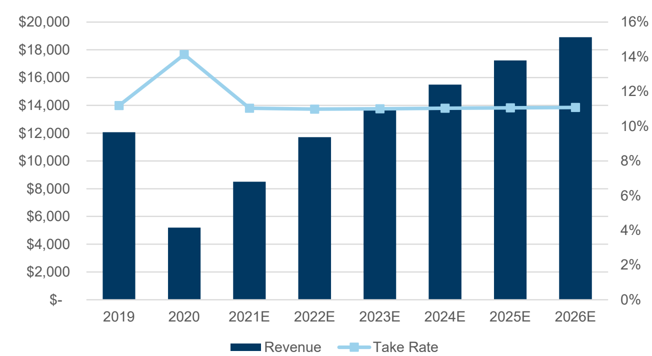
In terms of gross bookings and revenue growth, we assume Expedia grows gross bookings from $77bn in 2021 to $171bn in 2026 (17% '21-'26 CAGR), with merchant bookings continuing to grow as a percent of the total. Further, we model revenue growing from $8.5bn in 2021 to $18.9bn in 2026 (17% '21-'26 CAGR) with take rates generally stable in the low-double digits on a consolidated basis. We'd note on a normalized basis (i.e. post-COVID comps), we expect both Expedia & Booking to grow gross bookings and revenue in the high-single digit/low-double digit range.

Exhibit 232: Expedia Gross Bookings
$mm, '19-'26



Source: Company data, Goldman Sachs Global Investment Research

Exhibit 233: Expedia Revenue
$mm, '19-'26

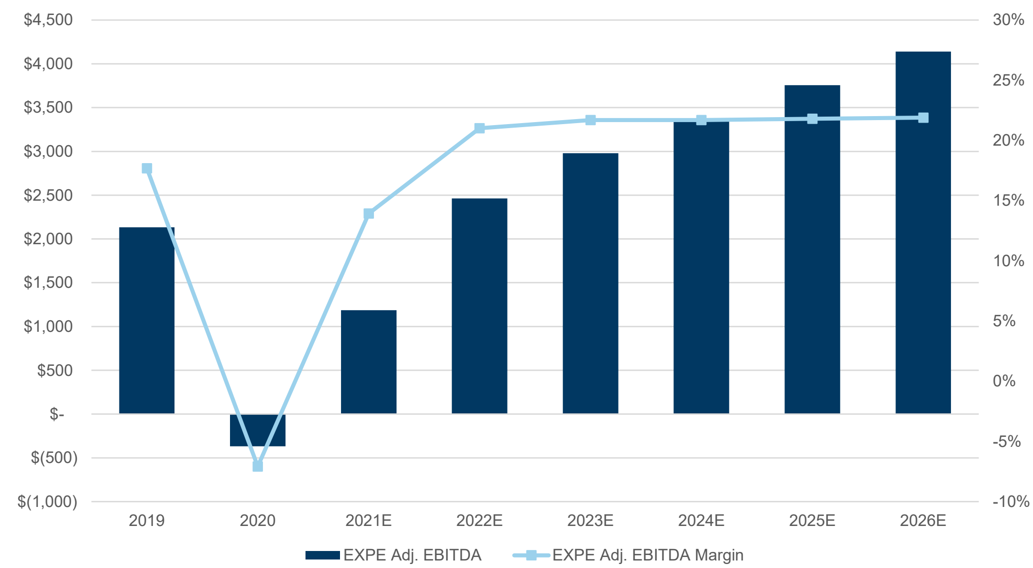


Source: Company data, Goldman Sachs Global Investment Research

Key Debate #2: Will Expedia's efficiency initiatives and investments to align the business for growth produce a rising margin narrative in 2022-2024?

Our View – Yes. We see Expedia driving Adj. EBITDA margins from 2019 levels of ~18% to ~22% in 2023 on the back of broader end demand recovery in travel, idiosyncratic fixed cost reductions & executing against certain variable cost efficiency initiatives. We are optimistic about the medium/long-term trajectory of Expedia's operating margins on the back of management's actions addressing its less efficient cost structure & levels of spending in the last 3-5 years (pre-COVID). The company has been executing against its plan to cut ~$750mm of fixed costs vs. 2019 exit rate (and $200mm+ in variable cost savings related to payments, customer service & cloud costs). The full effect of these cost initiatives will bear out in its margin structure upon a full volume recovery to travel (our projection of mid-'22). To that point, we have modeled Adj. EBITDA margins in 2023 of ~22% vs ~18% in 2019. We see potential upside to this estimate in 2023/2024 should the company be able to execute against additional marketing optimization and/or growth output from investments.

Exhibit 234: Expedia Adj. EBITDA & Margins
$mm, '19-'26



Source: Company data, Goldman Sachs Global Investment Research

In the sensitivity analysis below, we lay out a range of outcomes for Expedia's Adj. EBITDA is 2021-2023 based on: 1) a 50/50 fixed vs. variable cost structure in 2020 (in periods of normalized demand, we believe variable costs are roughly 2/3 of the cost structure), 2) Expedia finishing $750mm of fixed cost reductions by the end of 2021, 3) fixed costs growing at 8% per year in 2021-2023, 4) a range of $0-300mm in incremental variable cost efficiencies in 2021, & 5) variable costs growing in line with revenue in 2022 & 2023. In a scenario where $300mm of incremental variable costs are removed from the P&L, we estimate Adj. EBITDA could be closer to $3.4bn in 2023 (vs. our base case of $3.0bn).

Exhibit 235: Expedia - Adj. EBITDA Sensitivity Analysis
$mm

		Incremental Variable Cost Efficiencies in 2021							
		$ -	$ 50	$ 100	$ 150	$ 200	$ 250	$ 300	GSe
Adj. EBITDA	2021E Adj. EBITDA	$ 1,019	$ 1,069	$ 1,119	$ 1,169	$ 1,219	$ 1,269	$ 1,319	$ 1,185
	2022E Adj. EBITDA	$ 2,197	$ 2,266	$ 2,335	$ 2,403	$ 2,472	$ 2,541	$ 2,610	$ 2,462
	2023E Adj. EBITDA	$ 2,872	$ 2,953	$ 3,034	$ 3,114	$ 3,195	$ 3,276	$ 3,357	$ 2,979

Source: Company data, Goldman Sachs Global Investment Research

Like other industry players, Expedia seeks to garner greater share of consumer travel spend by offering additional bookable segments (i.e. air travel, alternative accommodations, experiences, tours, activities, etc.) & investing in brand advertising. In doing so, the company aims to increase the number of direct touch-points & frequency of use among users (i.e. the "connected trip") as a path to increase customer lifetime value vs. customer acquisition costs. This overall topic remains a key one for OTA investors – can the industry lessen its dependence on paid performance marketing (Google as the main source) and drive deeper awareness/loyalty around their brands and amplify direct traffic in order to drive growth and optimize marketing. While we acknowledge the vision of the OTAs to improve variable cost structures of their businesses, the travel industry has historically been characterized as marketing intensive and having a customer base that is generally less loyal to one particular brand. While we do not expect widespread success of such an effort in our base case, we will continue to monitor developments in our industry channel checks in the years ahead.

Key Debate #3: Can Expedia amplify equity returns with shareholder returns?

Our view – Yes. In the past 12 months, Expedia has made strategic moves to re-position its asset portfolio & focus around consumer leisure travel brands (hotel, alternative accommodation), disposed of businesses not in its core focus, and improved its cost structure. When examining its balance sheet and FCF generation potential, we see Expedia with an ability to return outsized capital to shareholders in the coming years.

EXPE has ~$10bn of net debt (GS estimate) on its balance sheet at Q2 '21, which we forecast to turn to ~$2bn of net cash by the end of 2026. While the company's business model was under pressure from a mixture of cancellations and lack of demand at the height of the pandemic, management shored up the balance sheet by raising capital, cutting costs, suspending the dividend & halting stock buybacks. In addition, Expedia has announced the sale or proposed sale of certain non-core assets (e.g., ALICE, Egencia). On the back of these moves and in a more normalized demand environment, we see the potential for Expedia to exceed Street forecasts on margins in the coming years and generating robust FCF (especially when measured against its market cap). Below we provide a scenario analysis around Expedia's implied PE ratio assuming the company chooses to allocate 100% of annual FCF generation (less change in deferred merchant bookings) to buy back stock. Based on our analysis, Expedia would be able to buy back ~40% of its current market cap. As of Q2 '21, EXPE had 23.3mm shares remaining on its current stock buyback authorization. We have not modeled in the execution of this buyback in our financial model as management has stated it is on hold until the end market environment normalizes.

Exhibit 236: Expedia - Share Buyback Analysis
mm except per share data

		2022E		2023E		2024E		2025E		2026E
Free Cash Flow	$	2,481	$	2,874	$	3,220	$	3,595	$	3,957
Less: Change in deferred merchant bookings	*$*	*984*	*$*	*1,253*	*$*	*1,347*	*$*	*1,448*	*$*	*1,519*
Adj. Free Cash Flow	$	1,498	$	1,621	$	1,873	$	2,147	$	2,438
% of Adj. FCF Used for Repurchases		*100%*		*100%*		*100%*		*100%*		*100%*
Total Potential Share Repurchases	$	1,498	$	1,621	$	1,873	$	2,147	$	2,438
Stock Price*	$	158	$	169	$	181	$	193	$	207
Potential Shares Repurchased		9.5		9.6		10.4		11.1		11.8
GSe Share Repurchases	$	-	$	-	$	-	$	-	$	-
Total Potential Share Repurchases	$	1,498	$	1,621	$	1,873	$	2,147	$	2,438
GSe Avg Diluted Shares		170.0		171.9		173.9		175.9		178.0
GSe Avg Shares Repurchased		0.0		0.0		0.0		0.0		0.0
Potential Shares Repurchased		9.5		9.6		10.4		11.1		11.8
Potential Avg Diluted Shares		160.5		162.3		163.5		164.8		166.2
Implied GAAP EPS	$	4.56	$	6.33	$	7.55	$	8.91	$	10.39
% upside vs. GS ests		*6%*		*6%*		*6%*		*7%*		*7%*
Implied PE		**32.3x**		**23.3x**		**19.5x**		**16.6x**		**14.2x**
Average Assumed Price	$	183								
Total Shares Repurchased (mm)		52.35								
Total Potential Share Repurchases	$	9,577								
% of Current Market Cap		39%								

*Assumes 7% annual appreciation; Share price as of 8/23/21

Source: Company data, Goldman Sachs Global Investment Research, FactSet

GS Estimates vs. Consensus

In our modeling, we are tracking slightly ahead of FactSet estimates on revenue & adjusted EBITDA. Over the near-term, debates will persist around the broader travel recovery. Over the long-term, there could be upside in our modeling of Expedia's revenues & EBITDA should a faster recovery in global travel come to fruition and/or better than expected execution around variable cost efficiencies flowing through the model.

Exhibit 237: Expedia - GS Estimates vs. Consensus
$mm

	Q3 2021			2021			2022		
	GS Est	Cons Est	% GS vs. Cons	GS Est	Cons Est	% GS vs. Cons	GS Est	Cons Est	% GS vs. Cons
Gross Bookings	$ 21,146	$ 20,772	2%	$ 77,057	$ 75,954	1%	$ 106,643	$ 100,024	7%
Revenue	$ 2,876	$ 2,769	4%	$ 8,502	$ 8,329	2%	$ 11,716	$ 11,403	3%
Retail	$ 2,382	$ 2,346	2%	$ 6,854	$ 6,721	2%	$ 9,462	$ 8,932	6%
B2B	$ 357	$ 395	-10%	$ 1,322	$ 1,343	-2%	$ 1,836	$ 2,081	-12%
Trivago	$ 161	$ 163	-1%	$ 409	$ 432	-5%	$ 528	$ 631	-16%
Intercompany	$ (25)	$ (39)	-36%	$ (83)	$ (96)	-14%	$ (110)	$ (151)	-27%
GAAP EBITDA	$ 566	$ 682	-17%	$ 785	$ 1,113	-29%	$ 2,121	$ 2,049	4%
Adj. EBITDA	$ 655	$ 642	2%	$ 1,185	$ 1,184	0%	$ 2,462	$ 2,373	4%
GAAP EPS	$ 1.33	$ 1.04	28%	$ (4.56)	$ (5.04)	-9%	$ 4.31	$ 3.67	17%
Adj. EPS	$ 2.14	$ 1.85	16%	$ 0.23	$ (0.62)	-137%	$ 7.37	$ 6.50	13%

Source: FactSet, Goldman Sachs Global Investment Research

Valuation & Risk/Reward

Referencing our valuation framework, we apply the two-pronged approach for more mature companies (~20% or lower growth in the forward 2-3 years) to our Expedia price target. Our $185 12 month price target is based on an equal blend of: (1) EV/GAAP EBITDA applied to our 2023 estimates and; (2) a modified DCF using an EV/(FCF-SBC) multiple applied to our 2026 estimates discounted back 3 years. Specifically:

- 14x EV/GAAP EBITDA (or 0.2x EV/EBITDA-to-growth) applied to our 2023 estimates. Historically, Expedia has traded at an EV/GAAP EBITDA +/- 1 standard deviation range of 5x-22x on a one-year forward multiple basis (or a ratio of 0.4-1.0x when adjusted for growth). We'd note on a normalized basis we model low-double digits/mid-teens EBITDA growth, which would imply a growth adjusted multiple closer to ~1x. Further, this compares to a comp set of online travel peers that have historically traded in a +/- 1 standard deviation range of 9x-17x EV/GAAP EBITDA on an absolute basis (or 0.3x-0.8x on an EV/GAAP EBITDA-to-Growth basis).
- 17x EV/FCF-SBC multiple applied to our 2026 estimates discounted back 3 years at 12%. The discount rate represents CAPM using the blended average of companies within our coverage universe consisting of: (1) 3% risk free rate (based on the normalized 10-year rate); (2) average beta of ~1.3; (3) equity risk premium of 7%.

Exhibit 238: Expedia Price Target
$mm except per share data

Scenario Analysis	Downside	Base	Upside
Valuation	$ 85	$ 185	$ 255
% upside/downside	-42%	25%	73%
Sales (FY22E)	$ 10,779	$ 11,716	$ 12,653
Downside/Upside Adjustment	-8%	-	8%
Sales (FY23E)	$ 12,356	$ 13,729	$ 15,102
Downside/Upside Adjustment	-10%	-	10%
EV / 2023 Sales (implied)	1.8x	2.8x	3.4x
Sales CAGR ('21-'23)	20.6%	27.1%	33.3%
EV / Sales to Growth (implied)	0.09x	0.10x	0.10x
GAAP EBITDA (FY22E)	$ 1,779	$ 2,121	$ 2,341
EBITDA Margin %	16.5%	18.1%	18.5%
GAAP EBITDA (FY23E)	$ 2,039	$ 2,590	$ 2,945
EBITDA Margin %	16.5%	18.9%	19.5%
EV / 2023 EBITDA	10.0x	14.0x	17.0x
EBITDA CAGR ('21-23)	61.1%	81.6%	93.7%
EV / EBITDA to Growth	0.16x	0.17x	0.18x
Enterprise Value	$ 20,388	$ 36,259	$ 50,063
FCF-SBC (FY26E)	$ 2,742	$ 3,439	$ 3,120
FCF % of Sales	14.5%	18.2%	16.5%
EV / 2026 FCF-SBC	13.0x	17.0x	22.0x
FCF-SBC CAGR ('23-'26)	3.3%	11.4%	7.9%
EV / FCF-SBC CAGR	3.89x	1.48x	2.79x
Discount Rate	15%	12%	10%
Discount Period (Years)	3	3	3
Enterprise Value (2025)	$ 35,640	$ 58,463	$ 68,633
Discounted Enterprise Value (2022)	$ 23,434	$ 41,613	$ 51,565
Weighting			
EV derived from GAAP EBITDA	50%	50%	50%
EV derived from (FCF-SBC)	50%	50%	50%
Enterprise Value	$ 21,911	$ 38,936	$ 50,814
Capital Structure Adjustments			
Adjusted Net Debt - 2022E	$ 7,418	$ 7,418	$ 7,418
Shares Outstanding - 2022E	170	170	170

Source: Company data, Goldman Sachs Global Investment Research

Key Risks

Downside risk factors to our Buy rating and price target include:

- The rise of COVID variants impacting forward travel bookings could result in bookings & revenue growth to underperform our base case estimates;

- The travel demand recovery pace in a post-COVID world could result in a longer period of time to return to 2019 levels in a downside scenario;
- Loss of North America market share to its peers would likely cause bookings & revenue to underperform our base case estimates and result in the need to incrementally invest in marketing;
- Industry competitive intensity pressures revenue take rates and operating margins;
- Disappointing level of shareholder returns in forward years would limit a potential positive catalyst for the stock in the future.

Company Description

Expedia Group is an online travel company operating a number of brands, including Expedia, Hotels.com, Expedia Partner Solutions, Vrbo, Egencia, trivago, Orbitz, Travelocity, Hotwire & Wotif, among others. Across its platforms consumers can book accommodations, airline ticketing, car rentals, cruises, activities/experiences, etc. The company primarily generates revenue based on a commission rate applied to the total booking amount of the travel reservation, as well as through advertising various other services.

DoorDash (DASH, Neutral, $187 PT): Normalized Growth Question Looms; Valuation Pricing In Long-Term Platform Success

Investment View

We are initiating coverage of DoorDash with a Neutral rating and a 12-month price target of $187. We view DoorDash as a category leader in US food delivery (especially in more suburban and less dense markets) with additional global presence in Canada (launched in 2015), Australia (launched in 2019) and Japan (launched in 2021). Increasingly, the company is expanding its platform to include an array of innovative products (DashPass, Drive, Storefront, DashMart, etc.) on both the consumer and merchant side while eyeing the potential for further international expansion in the years ahead. Two main themes are likely to dominate the stock performance of DASH: 1) short-term it will be the rate of GOV & revenue growth deceleration in a post pandemic world & 2) long-term it will be their success in building a wider array of products/services and scaling a broader local commerce platform. At current levels, our Neutral rating reflects a relatively balanced risk/reward skew and the fact that DASH already trades at very healthy valuation multiples (both absolute and relative to growth).

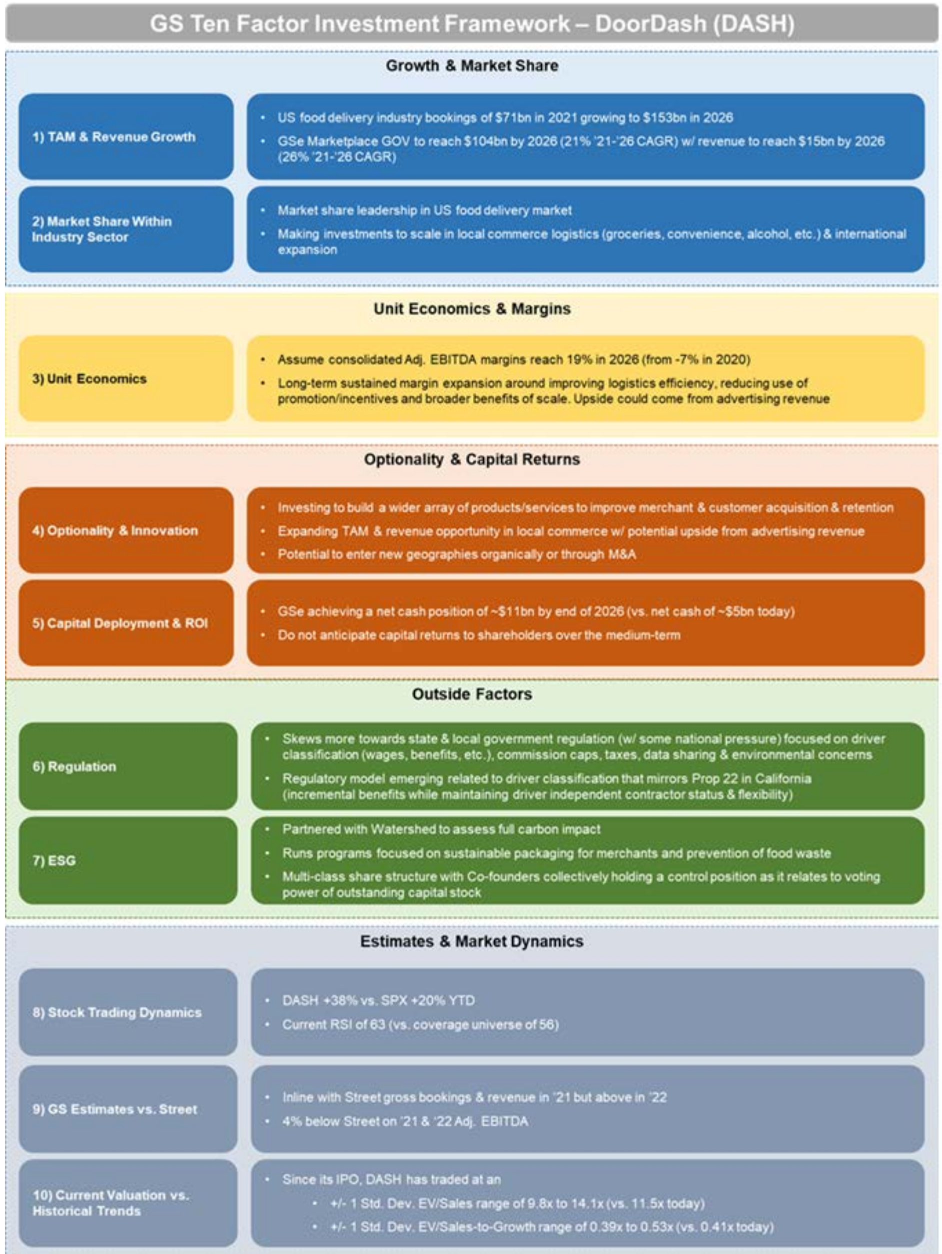
In this initiation, we frame the DoorDash investment case around three key debates: **1) Will DoorDash be able to sustain 20%+ topline growth in a normalized post-COVID environment?** Our view – Yes. We see a normalization of food delivery playing out in the coming quarters but estimate a $153bn US Food Delivery TAM by 2026 (from $50bn in 2020), representing a '20-'26 CAGR of ~20% with an exit rate in the mid-teens; **2) Can DoorDash achieve long term 30%+ Adj EBITDA margins?** Our view – Likely, but not a focus for management over the medium-term. We have DoorDash achieving ~19% Adj EBITDA margins in 2026 (up from 6.5% in 2020) as the company sees scale benefits. That being said, management has consistently messaged that the focus is on expansion of its platform into new products, categories and geographies to drive growth for the foreseeable future; and **3) Will DoorDash be successful in driving more local commerce (i.e., non-food delivery) on to its platform?** Our view – Work in Progress. We think its likely that an increasing number of local merchants (ex-food delivery) will avail themselves of third-party platforms for demand generation and local logistics capabilities in the years ahead. However, certain open debates are unlikely to be answered in the short/medium term, including the breadth & depth of consumer and merchant adoption as well as the competitive landscape and marketing intensity.

We see DoorDash generating a '21-'26 revenue CAGR of 26%, driven by its core food delivery platform with an increasing contribution from local commerce over the medium/long-term. Further, we model 2026 GAAP EBITDA margin of 12% (compared to -11% in 2020) as the company builds scale in its operations in the coming years while management also remains focused on its key long-term investment objectives. One key short-term debate will be the degree to which DoorDash's food delivery platform slows in a post-COVID normalized environment compared to what is being priced in at current stock price levels. At current valuation levels, we see a balanced risk/reward skew into decelerating GOV & revenue growth trends, consistent investments against large TAMs with long runway for penetration curves to steepen and growth adjusted valuation at the upper band of historical levels for the sector.

GS Internet Investing Framework

DoorDash screens positively as we apply the key themes and tenets of our Goldman Sachs Internet Investing Framework, including multiple large & fast growing TAMs, product innovation, industry leadership, pricing inflation dynamics & rising gross/operating margins in the coming years as scale builds. The company does continue to face regulatory scrutiny over driver employment status and merchant commission levels. Our industry analysis & idiosyncratic fundamental work supports our long-term thesis.

Exhibit 239: Ten Factor Investment Framework - DoorDash (DASH)



Source: FactSet, Company data, Goldman Sachs Global Investment Research

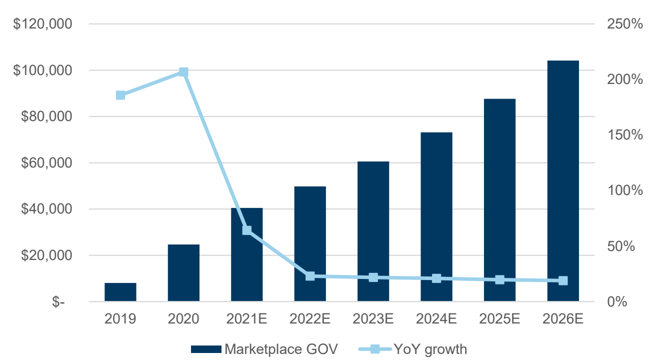
Three Key Debates & Our View

Key Debate #1: Will DoorDash be able to sustain 20%+ topline growth in a normalized post-COVID environment?

Our view – Yes. We see a normalization of food delivery playing out in the coming quarters but still see long runway for penetration rates in food delivery to steepen against a large TAM. Specifically, we estimate DoorDash has exposure to a potential $153bn TAM by 2026 (from $50bn in 2020), representing a '20-'26 CAGR of ~20% with an exit rate in the mid-teens (Exhibit 11). We'd note this represents food delivery increasing penetration of total food & beverage spend from 3% in 2020 to 9% in 2026 (Exhibit 12). We assume DoorDash grows Marketplace GOV from $25bn in 2020 to

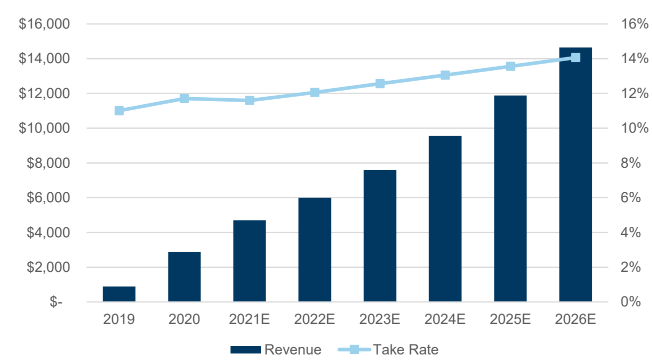
$104bn in 2026 (~27% '20-'26 CAGR), with the US growing from $24bn to $86bn over the same time period. In US food delivery, we see DASH moving from ~55% market share today to ~56% in 2026. This results in our revenue estimates for DoorDash growing from $2.9bn in 2020 to $14.7bn in 2026 (~31% '20-'26 CAGR). We'd note revenue growth is faster than GOV growth given assumed take rate expansion primarily driven by: 1) accounting benefit from DoorDash Drive (white-label logistics product) growing faster than the Marketplace business (Drive GOV is not included in Marketplace GOV), & 2) better efficiency on logistics and use of incentives & promotions. This will be partially offset by: 1) DashPass (subscription offering) orders increasing as a percentage of the total (lower take rate and unit economics but greater frequency of orders resulting in higher aggregate dollar revenue & profit) and 2) any incremental costs related to worker classification changes running through the P&L (i.e., Prop 22 in California) or commission caps becoming permanent in certain cities.

Exhibit 240: DoorDash Marketplace GOV
$mm, '19-'26



Source: Company data, Goldman Sachs Global Investment Research

Exhibit 241: DoorDash Revenue & Take Rate
$mm, '19-'26



Source: Company data, Goldman Sachs Global Investment Research

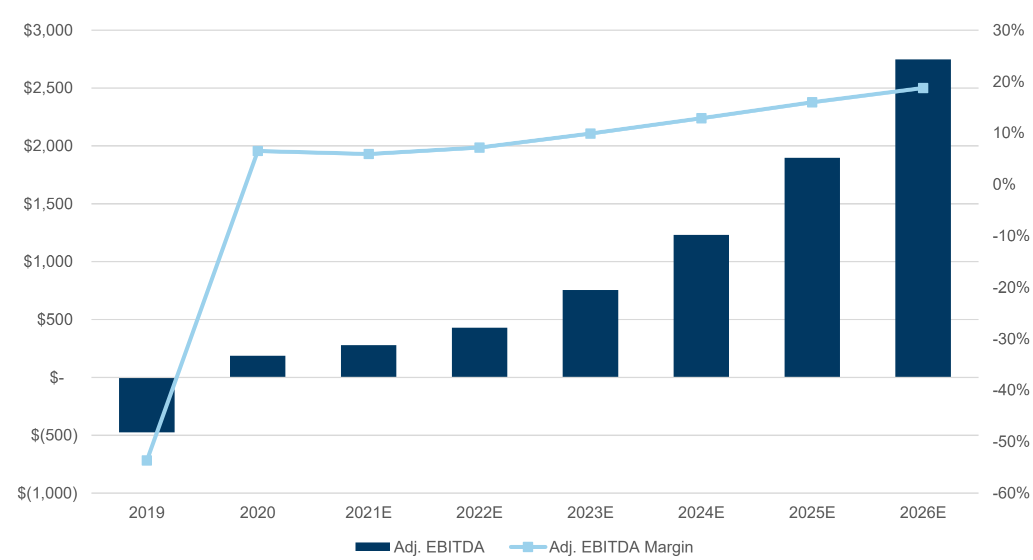
Beyond the core food delivery opportunity in its existing markets, we see a mix of product evolution (extending the reach of its multi-sided platform & removing friction from the platform) and geographic expansion as further support of DoorDash's growth profile in the coming years. In the short-term, the company is focused on the growth opportunity that resides in a broader array of logistics/delivery adoption across a number of end verticals of local commerce activities. DoorDash is positioning itself to capitalize on this trend in categories such as groceries, convenience, alcohol, pharmacy and offline retail (Exhibit 98). In our current modeling, we do not make an estimate for additional (organic or inorganic) market launches, which could amplify growth in the coming years. There is a three sided debate (which remain open-ended) that is playing out: 1) how competitive will the race to capture the local delivery/commerce end market become?; 2) what level of investment is needed to be competitive and how this could impact short/medium term margin trajectory; and 3) how will the scale of that business eventually impact long term revenue dollars and margins?

We highlight two aspects of platform growth/evolution that could warrant investor attention in the coming years. First, given the broader secular theme of subscriptions becoming a hallmark of consumer & platform utility (Exhibit 30), we see the value and retention merits of DashPass to be an interesting element of the DoorDash's platform (especially in terms of lowering consumer churn, driving greater velocity of usage & introducing additional product categories) that is likely to be a key driver of platform value over the long term (Exhibit 99 , Exhibit 100). Second, DoorDash Drive is yet another way the company is trying to meet merchants where they are through a host of merchant offerings/products in the name of driving category adoption and helping merchants grow their own businesses (Exhibit 28). While we believe Drive orders contribute only a few dollars of net revenue per order, the improved Dasher utilization, higher merchant platform adoption and category penetration growth all provide a net benefit to the business model. In terms of potential revenue headwinds, we remain focused on merchant/restaurant commission caps.

Key Debate #2: Can DoorDash achieve long term 30%+ Adj EBITDA margins?

Our view – Likely, but not a focus for management over the medium-term. Looking backwards, gross margins increased from ~40% in 2019 to 50%+ in 2020 as accelerated demand during the pandemic drove growth/scale on the platform. We have DoorDash achieving ~19% Adj EBITDA margins in 2026 (up from 6.5% in 2020) as the company sees scale benefits & operational improvements to the platform. Specifically, we forecast slight gross margin expansion (from the low-50% range today to mid-50% range by 2026) and additional leverage on operating expenses (primarily sales & marketing) over the forecast period of our model. That being said, management has consistently messaged that the focus is on expansion of its platform into new products, categories and geographies to drive growth for the foreseeable future. Over the long-term, we believe that DoorDash should be able to produce the 30%+ Adj. EBITDA margins typical of marketplace models over the maturation of its market opportunities. We think there could be upside to this target as well, especially when factoring in the potential advertising revenue opportunity.

Exhibit 242: DoorDash Adj. EBITDA & Margins
$mm, '19-'26



Source: Company data, Goldman Sachs Global Investment Research

We do expect all aspects of DoorDash's addressable market opportunity to remain with a high level of competitive intensity in the coming years due to market structure and growth opportunity that all industry players would like to capture. We expect this competitive intensity can manifest itself in the form of consumer pricing, marketing, driver incentives and/or new areas of growth like local commerce/logistics. In current periods, management has flagged that incremental investments are mainly aimed at driver/Dasher acquisition (given the tight employment market in the US). Over the medium term, we would note that the company continues to reiterate the bar for inorganic growth (via M&A) is becoming more challenging. As such, we expect most product/market extension and/or geographic expansion to come organically, which could result in elevated investments levels (and resulting margin implications) over the time period it takes to scale.

Key Debate #3: Will DoorDash be successful in driving more local commerce (i.e., non-food delivery) on to its platform?

Our view – Work in Progress. We think its likely that an increasing number of local merchants (ex-food delivery) will avail themselves of third-party platforms for demand generation and local logistics capabilities in the years ahead. However, certain open debates are unlikely to be answered in the short/medium term, including the breadth & depth of consumer and merchant adoption as well as the competitive landscape and marketing intensity.

Having built a market leading position in US food delivery (especially in Tier 2 & 3 markets), DoorDash has embarked on a mix of product innovation, merchant expansion & broadening of consumer offerings. Specifically, in addition to the traditional Marketplace offering (i.e., the DoorDash app) they have rolled out solutions such as Storefront, DoorDash Drive, DashMart and a merchant analytics portal.

Exhibit 243: DoorDash Merchant Solutions

Marketplace (DoorDash App)	Offers merchant a range of partnership plans across pickup & delivery solutions with a tiered commission structure based on desired sales reach & delivery options (including Dasher delivery, self-delivery & pickup)
Storefront	Turnkey solution that enables merchants to create their own branded online ordering experience
DoorDash Drive	White-label logistics service whereby merchant uses DoorDash logistics network for demand generated through their own channels
DashMart	Convenience store owned, operated, and curated by DoorDash where merchants can expand their retail presence and offer retail products and household essentials
Merchant Portal	Provides detailed metrics and analytics to merchants to help manage and grow their business

Source: Company reports, Goldman Sachs Global Investment Research

We expect these efforts could take shape around a few key verticals (food delivery, convenience, and grocery) with potential to extend into other household errands, personal services & shifts in big box retailing. We'd note online grocery penetration is expected to increase from mid-single digits to mid-teens over the next few years. In addition, the USDA estimates total spend on alcohol was ~$235bn in 2019, of which $115bn was consumed at home. What began as Amazon's industry altering shift to Prime 2-day shipping is quickly morphing into an industry competition for both consumers and merchants around same day and increasingly "next few hours" delivery.

While all of these elements create potential for more sustained growth than currently modeled, we will continue to watch elements of both consumer adoption (including permanence of shifts in shopping behaviors as a result of the pandemic) and merchant adoption. In addition, a number of industry players (Amazon, Uber, offline retailers, etc.) are all positioning themselves to capture the growth potential of local commerce moving online. As a result, we expect the level of competitive intensity to remain elevated in the years to come.

GS Estimates vs. Consensus

In our modeling, we are tracking inline to ahead with Street estimates on GOV and revenue over our 5 year forecast horizon ('21 to '26) but below on EBITDA. Over the near-term, debates will persist around rate of GOV and revenue growth deceleration in a post pandemic world and competitive intensity for drivers. Over the long-term, the focus will be on their success in building a wider array of products/services and scaling a broader local commerce platform across multiple geographies.

Exhibit 244: DoorDash - GS Estimates vs. Consensus
$mm

	Q3 2021			2021			2022		
	GS Est	Cons Est	% GS vs. Cons	GS Est	Cons Est	% GS vs. Cons	GS Est	Cons Est	% GS vs. Cons
Marketplace GOV	$ 9,797	$ 9,569	2%	$ 40,480	$ 40,251	1%	$ 49,770	$ 46,850	6%
Orders	330	329	1%	1,359	1,356	0%	1,723	1,654	4%
AOV	$ 29.65	$ 30.68	-3%	$ 29.78	$ 30.55	-3%	$ 28.88	$ 29.73	-3%
Revenue	$ 1,166	$ 1,132	3%	$ 4,696	$ 4,649	1%	$ 6,001	$ 5,657	6%
Take Rate	11.9%	11.8%	7	11.6%	11.6%	5	12.1%	12.1%	(2)
GAAP Gross Profit	$ 635	$ 635	0%	$ 2,457	$ 2,478	-1%	$ 3,218	$ 3,037	6%
GAAP EBITDA	$ (50)	$ (79)	-37%	$ (248)	$ (287)	-13%	$ (149)	$ (140)	6%
Adj. EBITDA	$ 66	$ 64	3%	$ 278	$ 291	-4%	$ 430	$ 448	-4%
GAAP EPS	$ (0.26)	$ (0.25)	7%	$ (1.22)	$ (1.08)	13%	$ (1.00)	$ (0.75)	34%
Adj. EPS	$ 0.07	$ (0.10)	-173%	$ 0.33	$ (0.45)	-173%	$ 0.62	$ (0.14)	-533%

Source: FactSet, Goldman Sachs Global Investment Research

Valuation & Risk/Reward

Referencing our broader valuation framework, we apply the two-pronged approach for growth companies (~20%+ revenue growth in the forward 2-3 years) to our DASH 12-month price target. Our $187 price target is based on an equal blend of: (1) EV/Sales applied to our 2023 estimates and; (2) a modified DCF using an EV/GAAP EBITDA multiple applied to our 2026 estimates discounted back 3 years. Specifically:

- 9.0x EV/Sales (or 0.33x EV/Sales-to-growth) applied to our FY23 estimates. This compares to a comp set of food delivery peers that have historically traded in a +/- 1 standard deviation range of 4.4x-8.0x EV/Sales on an absolute basis (or 0.14x-0.28x on an EV/Sales-to-Growth basis). Further, this compares to a broader comp set of digital marketplace peers that have historically traded in a +/- 1 standard deviation range of 2.9x-5.5x EV/Sales on an absolute basis (or 0.16x-0.25x on an

EV/Sales-to-Growth basis).

- 55.0x EV/GAAP EBITDA multiple applied to our FY26 estimates discounted back 3 years at 12%. The discount rate represents CAPM using the blended average of companies within our coverage universe consisting of: (1) 3% risk free rate (based on the normalized 10-year rate); (2) average beta of ~1.3; (3) equity risk premium of 7%. We'd note this implies an EV/GAAP EBITDA-to-Growth of ~0.7x on 2026 GAAP EBITDA growth, which compares to digital marketplace peers at a historical +/-1 std. dev. range of 0.8x-1.0x on a one-year forward basis.

Further, our DASH PT implies an EV/2023 Marketplace GOV of ~1.0x (assuming ~6x our estimates 2023 DoorDash Drive revenue of $1.2bn). This compares to 0.8x that we use in our UBER SOTP for Uber's US Delivery business. We think the slight premium is justified given DoorDash's #1 market share positioning in US food delivery.

Exhibit 245: DoorDash Price Target Analysis
$mm expect per share data

Scenario Analysis	Downside	Base	Upside
Valuation	$ 111	$ 187	$ 272
% upside/downside	-44%	-5%	38%
Sales (FY22E)	$ 5,401	$ 6,001	$ 6,601
Downside/Upside Adjustment	-10%	-	10%
Sales (FY23E)	$ 6,693	$ 7,605	$ 8,518
Downside/Upside Adjustment	-12%	-	12%
EV / 2023 Sales	6.0x	9.0x	12.0x
Sales CAGR ('21-'23)	19.4%	27.3%	34.7%
EV / Sales to Growth	0.31x	0.33x	0.35x
Enterprise Value	$ 40,155	$ 68,447	$ 102,214
GAAP EBITDA (FY26E)	$ 1,392	$ 1,734	$ 2,051
GAAP EBITDA Margin %	9.5%	11.8%	14.0%
EV / 2026 GAAP EBITDA	40.0x	55.0x	65.0x
GAAP EBITDA CAGE ('23-'26)	166.1%	186.3%	202.8%
EV / EBITDA-to-Growth	0.24x	0.30x	0.32x
Discount Rate	15%	12%	10%
Discount Period (Years)	3	3	3
Enterprise Value (2025)	$ 55,673	$ 95,386	$ 133,321
Discounted Enterprise Value (2022)	$ 36,606	$ 67,894	$ 100,166
Weighting			
EV derived from Sales	50%	50%	50%
EV derived from GAAP EBITDA	50%	50%	50%
Enterprise Value	$ 38,381	$ 68,170	$ 101,190
Capital Structure Adjustments			
Adjusted Net Debt - 2022E	$ (4,852)	$ (4,852)	$ (4,852)
Shares Outstanding - 2022E	390	390	390

Source: Company data, Goldman Sachs Global Investment Research

Key Risks

Risks to our Neutral rating (upside/downside for the stock) include:

- Rate of growth in the post pandemic "new normal" for food delivery;
- Marketing spend levels needed to drive both demand and supply growth in their marketplace;
- Regulation of restaurant commissions and worker classification laws;
- Competitive aspects of Local (food delivery & commerce);
- Expansion into International markets (contribution to growth vs. costs/investments needed to launch such markets organically or inorganically);
- Medium term profitability vs. Street estimates proving out the normalized margin of the business mix;

- Volatility caused by the global macroeconomic environment & investor risk appetite for growth stocks.

Company Description

DoorDash offers an on-demand local commerce & logistics platform that enables & connects local businesses (primarily restaurants) with consumers and a network of delivery people (Dashers). Through its marketplace, the company provides a number of services including customer acquisition, delivery, insights and analytics, merchandising, payment processing, and customer support. DoorDash primarily generates revenue through commission fees from merchants & consumers.

Lyft Inc. (LYFT, Buy, $64 PT): Repositioned Platform Aimed at Mobility Volumes

Investment View

We are initiating coverage of Lyft with a Buy rating and a 12-month price target of $64. We see Lyft as a pure play on the theme of transportation disruption in North America with some upside optionality around the rise of micromobility and the company's ability to expand its network into last mile eCommerce/logistics. Over the short/medium term, we see the key debate for the shares to be centered on the North America ridesharing demand recovery (in a post-COVID world). Further, the medium/long-term debate centers on the mix of compounded revenue growth and margin structure that Lyft will be able to produce with a focus on the transportation market opportunity.

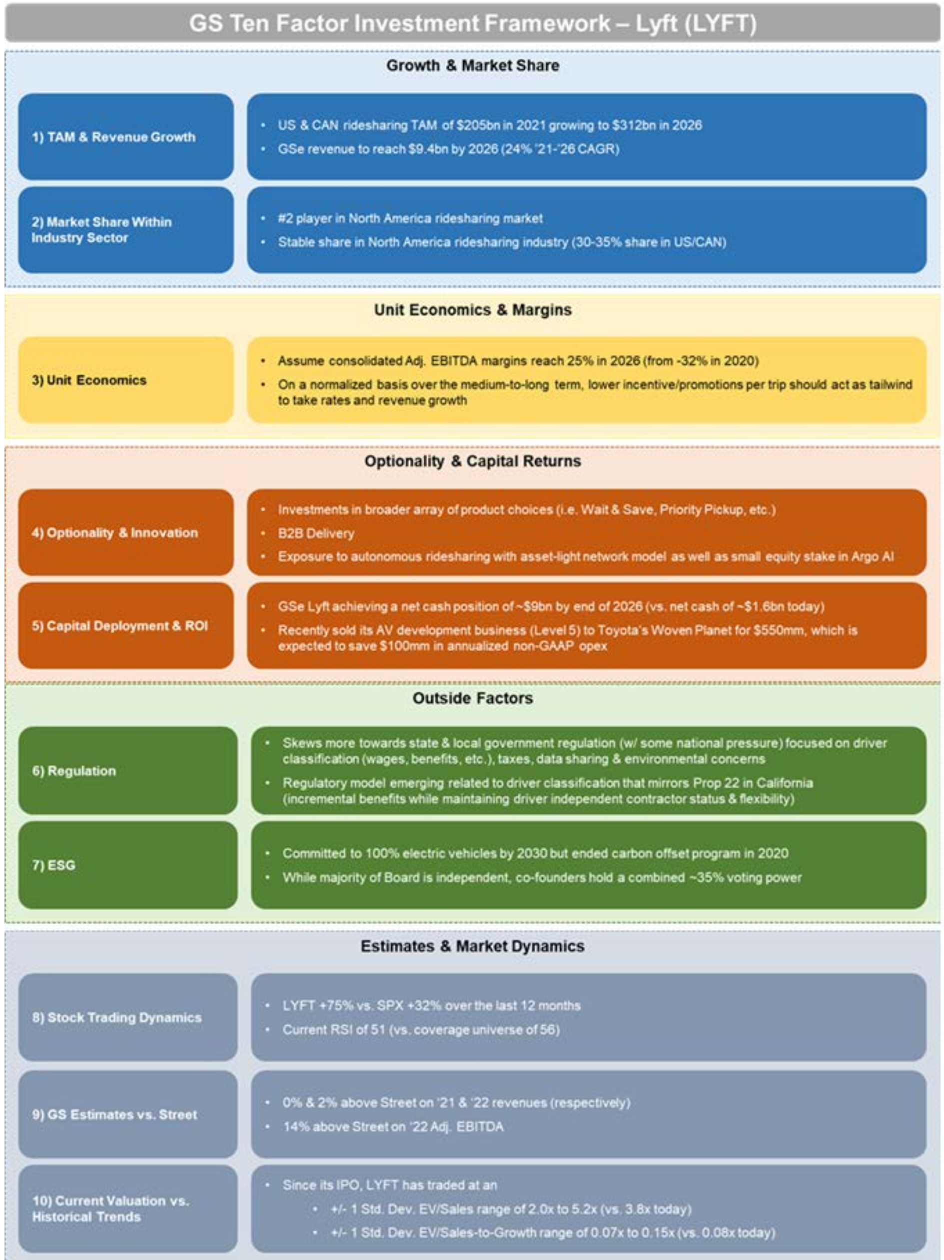
In this initiation, we frame Lyft around three key debates: **1) Will Lyft be able to sustain ~20% revenue growth as a '21-'26 CAGR?** Our view – Yes. We see a normalization of ridesharing demand by the end of 2021/beginning of 2022 against a relatively low penetration (17%) of our forecasted US & Canada ridesharing TAM of $205bn in 2021; **2) Can Lyft achieve its long-term profitability targets given industry and regulatory dynamics?** Our View – Yes. Long-term, we see Lyft achieving 25% Adj. EBITDA margins (vs. its long-term targets of 20%+) & view competitive intensity and regulatory headwinds as manageable in the coming years. One caveat is that Lyft's #2 market share position may cause it to underperform industry leading margins as it is less likely to enjoy scaled benefits; & **3) Will Lyft be successful in expanding the breadth of platform offerings?** Our view – Work in progress. Lyft management has made acquisitions and organic market deployment in micromobility (i.e., Motivate which includes Citi Bike in NYC) as a means of diversifying from pure ridesharing in major metro areas & has rolled out a number of partnerships (i.e., Grubhub). That said, its white label delivery business (think offline retailers utilizing the network for short duration deliveries) remains a work in progress. In addition, we did see Lyft management's decision to shift its autonomous efforts away from owned & operated AVs and towards an asset light marketplace for AVs to utilize as a positive capital allocation decision.

We see Lyft generating a '21-'26 revenue CAGR of 24%, driven predominantly by its core ridesharing product with active riders growing at a 16% CAGR and revenue per active rider growing at a 7% CAGR over the same time period. Further, we forecast 2026 GAAP EBITDA margins of 13% (compared to -70% in 2020) as Lyft builds scale in its operations in the coming years but remaining largely focused on investments to drive a mixture of user and consumption growth going forward. As a result of the pandemic, LYFT (as a stock) has been a story of two narratives since March 2020 – initially hard hit in terms of stock reaction to the collapse in end demand and since mid-2020 a robust recovery from its lows as it became a key beneficiary of the "re-opening trade." That said, in the past 6 months, LYFT has significantly underperformed the market. One key short-term debate that could cause volatility in the stock is the path to normalization of demand in the ridesharing business in the coming quarters and how much customer/driver incentives need to be maintained in order to balance demand with supply in the recovery.

GS Internet Investing Framework

Lyft screens with mixed results as we apply the key themes and tenets of our Goldman Sachs Internet Investing Framework. On the positive side: a) a large/growing TAM tied to transportation disruption, b) pricing inflation dynamic and c) rising gross/operating margins in the coming years as scale builds. On the negative side, a) Lyft is a clear #2 player in North America ridesharing (in terms of market share), b) has to invest in customer demand and driver supply from relatively less scale & c) while the majority of the Board is independent, the co-founders hold a combined ~35% voting power. That said, our forward operating estimates are inline to slightly ahead of Street estimates. Our industry analysis & idiosyncratic fundamental work supports our long-term thesis.

Exhibit 246: Ten Factor Investment Framework - Lyft (LYFT)



Source: Company data, Goldman Sachs Global Investment Research, FactSet

Three Key Debates & Our View

Key Debate #1: Will Lyft be able to sustain ~20% revenue growth as a '21-'26 CAGR?

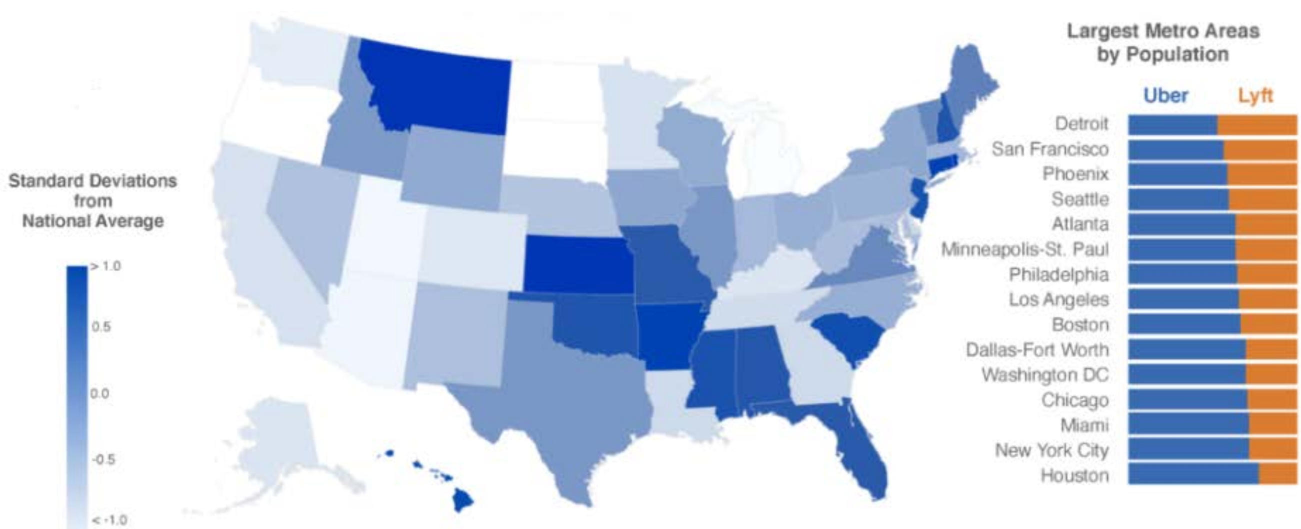
Our view – Yes. Lyft is the #2 player in the North America ridesharing and has emerging upside optionality around transportation disruption (micro mobility, multi-modal offerings, autonomous vehicles in their network, etc). While Internet investors have typically applied higher multiples (absolute and to-growth) to larger, scaled platform ecosystem companies with leading market share positions than the pure play (especially if not the end market leader) we'd note ridesharing is more of a local business (as opposed to national) and in certain end markets (Portland, Phoenix, Detroit, San Francisco) we see Lyft having greater market share compared to its national average.

One open-ended question that persists is how consumer behavior around transportation might have been changed by the pandemic (public transportation usage, micromobility, car ownership, shared rides) and whether the broader disruptive "transportation as a service" market will be positively or negatively impacted by such shifts.

In this initiation, we have examined the TAM for North America ridesharing. We see US & Canada ridesharing as a $35bn market today (which is 17% penetrated of the $205bn end market opportunity) and we see that market growing to $103bn by 2026 (still only a 33% penetration rate). Against that market opportunity, we see a path for Lyft to maintain a 20%+ '21-'26 revenue CAGR based on our forecasting. We see a normalization of ridesharing end market demand by the end of 2021/beginning of 2022. Despite its current market position, we still see Lyft producing well above global GDP growth during our 5-year forecasting period.

Against its main addressable market (North America ridesharing), we see Lyft having stable to slightly lower market share over forecast period of our model. Specifically, we see Lyft going from 32% to 29% market share of rideshare bookings in the US & Canada over the next 5 years. That said, Lyft has the ability to achieve rising take rates as deployment of incentives/promotions becomes more efficient. We do expect North America ridesharing (& all of transportation disruption) to remain competitive in the coming years due to the market structure and growth opportunity that can captured by industry players (though likely more rational than certain other geographies & local delivery). We expect this competitive intensity can manifest itself in the form of consumer pricing, marketing, driver incentives and/or new areas of growth like local commerce/logistics.

Exhibit 247: Uber vs. Lyft US Marktshare Share by City/State (July 2021)



Map depicts Uber's share by state as standard deviation from national average of 68%

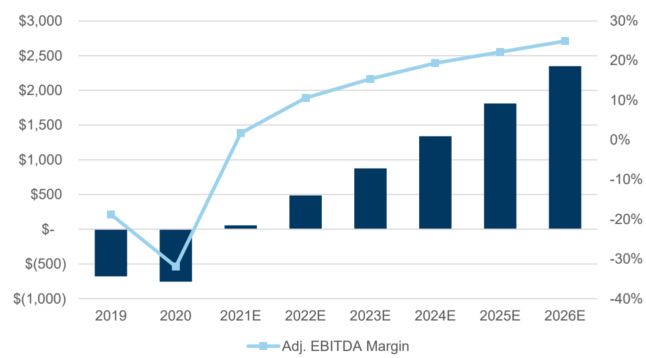
Source: Bloomberg Second Measure

Key Debate #2: Can Lyft achieve its long term profitability targets given industry and regulatory dynamics?

Our View – Yes. We see Lyft with a rising margin profile through the forecast period of our model. Specifically, we have Lyft going from -24% GAAP EBITDA margins in 2021 (but having turned profitable in 2Q21 on an Adj. EBITDA basis) to GAAP EBITDA margins of ~13% in 2026 (still producing ~50% YoY growth in 2026). Going back to Lyft management's messaging from its 2019 IPO, we see the company as a solidly profitable business over the long-term (achieving ~25% Adj. EBITDA margins in 2026 compared to the company's long-term target of 20%+).

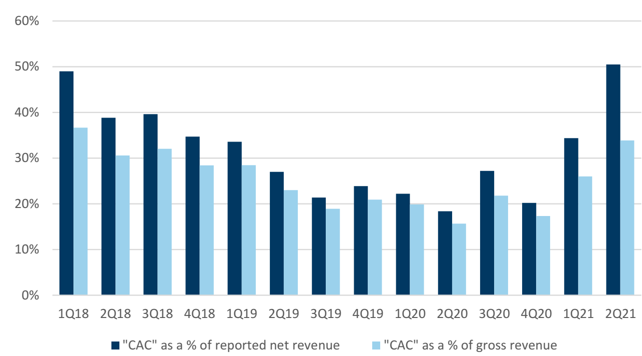
In the past year (as a reaction to COVID-19 demand shifts), Lyft has executed against a number of cost saving initiatives that have rationalized user growth incentives, sold its AV unit (Level 5), and reduced headcount & other fixed costs. In total, those initiatives have pulled more than $450mm out of Lyft's cost structure. These initiatives, in addition to a gradual recovery in ridesharing demand as cities reopen, have allowed Lyft to turn Adj. EBITDA profitable in 2Q21. That said, Lyft management has highlighted that driver incentives increased in Q2 and were likely to sustain at elevated levels in Q3 as the company tries to stimulate driver supply against a tight labor market & government stimulus/unemployment benefits (which will be a topic to monitor as benefits expire). Early indications have been that drivers are beginning to return to the network (Lyft disclosed that drivers increased 50% QoQ in Q2). Despite these open question of current driver supply and duration of incentives that might need to be deployed in order to rebalance the marketplace (and allow for consumer pricing to normalize), Lyft has committed to maintaining profitability going forward. We expect this to remain a key debate among investors in the coming months.

Exhibit 248: Lyft Adj. EBITDA & Margins
$mm, '19-'26



Source: Company data, Goldman Sachs Global Investment Research

Exhibit 249: Lyft Customer & Driver Acquisition Costs as % of Revenue



CAC is defined as reductions to revenue (related to driver, passenger & light vehicle incentives) and driver/passenger incentives included in S&M

Source: Company data, Goldman Sachs Global Investment Research

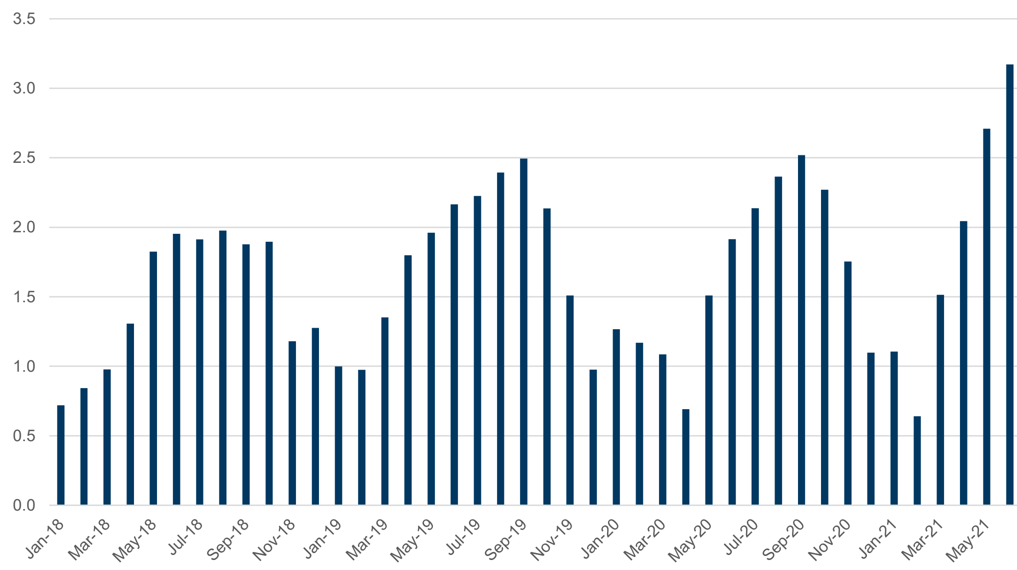
Key Debate #3: Will Lyft be successful in expanding the breadth of platform offerings?

Our view – Work in progress. Lyft management has made acquisitions and organic market deployment in micromobility (i.e., Motivate which includes Citi Bike in NYC) as a means of diversifying from pure ridesharing in major metro areas & rolled out a number of partnerships (i.e., Grubhub). That said, its white label delivery business (think offline retailers utilizing the network for short duration deliveries) remains a work in progress. In addition, we did see Lyft management's decision to shift its autonomous efforts away from owned & operated AVs and towards an asset light marketplace for AVs as a positive capital allocation decision.

In terms of investments, we see Lyft's primary focus being to continue driving deeper penetration of usage/spend by consumers in its core end market (especially since it is exposed to one of the largest and least penetrated end markets in Internet). In terms of product innovation, Lyft recently rolled out an app redesign focusing on offering a broader array of product choices to the consumer (i.e., Wait & Save, Priority Pickup, etc). In addition, the company continues to build out its in-house mapping technology with a goal of better routing for drivers (safer, lowers insurance costs, additional margin per ride) and that such savings could be passed onto consumers in terms of better pricing. On the consumer side, Lyft remains constructive on its Lyft Pink subscription offering (credit card partnership, product upgrades, partnership with Grubhub), which appears to be an area where incremental investment could trend once the driver supply issue is more normalized.

As mentioned previously, Lyft has recently made a strategic pivot related to its autonomous vehicle involvement and levels of capital deployment. Year to date, Lyft has sold its Level 5 unit to Toyota's Woven Planet for $550mm and partnered with Argo AI & Ford (w/ planned deployments of self-driving cars w/ safety drivers on the Lyft network in Miami and Austin soon). In addition, Lyft has existing partnerships with Motional (Hyundai & Aptiv JV) in Las Vegas and Waymo in the Phoenix Metro area whereby each company has deployed commercial AVs on the Lyft network. In total, we see Lyft's approach to autonomous as opex/capex light and playing to its strength as an existing network of consumer demand (w/ driver supply) as one of the best RoI approaches to autonomous for equity investors.

Exhibit 250: Citi Bike (NYC) Monthly Trips
mm



Source: Company data

GS Estimates vs. Consensus

In our modeling, we are tracking roughly inline to slightly ahead with Street estimates on revenue over our 5 year forecast horizon ('21 to '26). Over the near-term, debates will persist around the broader ridesharing recovery as well as need to deploy incentive/promotions to balance the supply/demand dynamic on the marketplace. Over the long-term, there could be downside risk in our modeling of Lyft's revenues & EBITDA should a slower recovery in North America ridesharing come to fruition and/or regulatory changes alter the P&L in the form of incremental costs and how Lyft would respond (i.e., potentially permanently higher consumer prices, which could impact demand).

Exhibit 251: Lyft - GS Estimates vs. Consensus

	Q3 2021			2021			2022		
	GS Est	Cons Est	% GS vs. Cons	GS Est	Cons Est	% GS vs. Cons	GS Est	Cons Est	% GS vs. Cons
Revenue	$ 857	$ 862	-1%	$ 3,211	$ 3,214	0%	$ 4,590	$ 4,509	2%
Active Riders (m)	20.1	20.2	0%	18.1	19.6	-8%	24.3	24.4	-1%
Revenue per Active Rider	$ 42.53	$ 43.93	-3%	$ 177.48	$ 174.03	2%	$ 189.17	$ 183.55	3%
Contribution	$ 506	$ 506	0%	$ 1,874	$ 1,868	0%	$ 2,734	$ 2,733	0%
Contribution Margin	59.0%	58.7%	1%	58.3%	58.1%	0%	59.6%	60.6%	-2%
GAAP EBITDA	$ (115)	$ (175)	-34%	$ (781)	$ (914)	-15%	$ (202)	$ (515)	-61%
Adj. EBITDA	$ 35	$ 32	8%	$ 55	$ 40	38%	$ 486	$ 427	14%
GAAP EPS	$ (0.48)	$ (0.58)	-18%	$ (2.88)	$ (3.15)	-8%	$ (1.09)	$ (1.53)	-28%
Adj. EPS	$ (0.03)	$ (0.03)	-6%	$ (0.35)	$ (0.39)	-11%	$ 0.79	$ 0.69	14%

Source: FactSet, Goldman Sachs Global Investment Research

Valuation & Risk/Reward

Referencing our broader valuation framework, we apply the two-pronged approach for growth companies (~20%+ revenue growth in the forward 2-3 years) to our LYFT price target. Our $64 price target is based on an equal blend of: (1) EV/Sales applied to our 2023 estimates and; (2) a modified DCF using an EV/GAAP EBITDA multiple applied to our 2026 estimates discounted back 3 years. Specifically:

- 4.0x EV/Sales (or 0.12x EV/Sales-to-growth) applied to our FY23 estimates. This compares to a comp set of digital marketplace peers that have historically traded in a +/- 1 standard deviation range of 2.9x-5.5x EV/Sales on an absolute basis (or 0.16x-0.25x on an EV/Sales-to-Growth basis).
- 25.0x EV/GAAP EBITDA multiple applied to our FY26 estimates discounted back 3 years at 12%. The discount rate represents CAPM using the blended average of companies within our coverage universe consisting of: (1) 3% risk free rate (based on the normalized 10-year rate); (2) average beta of ~1.3; (3) equity risk premium of 7%. We'd note this implies an EV/GAAP EBITDA-to-Growth of ~0.5x on 2026 GAAP EBITDA growth, which compares to digital marketplace peers at a historical +/-1 std. dev. range of 0.8x-1.0x on a one-year forward basis and our estimate for UBER of ~0.6x implied in our valuation.

Further, our LYFT PT implies an EV/2023 Gross Bookings of ~1.2x, which is inline with what we use in our UBER SOTP to value Uber's North America Mobility business.

Exhibit 252: Lyft Price Target Analysis
$mm expect per share data

Scenario Analysis	Downside	Base	Upside
Valuation	$ 33	$ 64	$ 86
% upside/downside	-35%	27%	70%
Sales (FY22E)	$ 4,131	$ 4,590	$ 5,049
Downside/Upside Adjustment	-10%	-	10%
Sales (FY23E)	$ 5,019	$ 5,704	$ 6,388
Downside/Upside Adjustment	-12%	-	12%
EV / 2023 Sales	2.0x	4.0x	5.0x
Sales CAGR ('21-'23)	25.0%	33.3%	41.0%
EV / Sales to Growth	0.08x	0.12x	0.12x
Enterprise Value	$ 10,039	$ 22,815	$ 31,941
GAAP EBITDA (FY26E)	$ 1,037	$ 1,260	$ 1,367
GAAP EBITDA Margin %	11.0%	13.4%	14.5%
EV / 2026 GAAP EBITDA	15.0x	25.0x	30.0x
GAAP EBITDA CAGE ('23-'26)	123.6%	138.6%	145.1%
EV / EBITDA-to-Growth	0.12x	0.18x	0.21x
Discount Rate	15%	12%	10%
Discount Period (Years)	3	3	3
Enterprise Value (2025)	$ 15,550	$ 31,509	$ 40,996
Discounted Enterprise Value (2022)	$ 10,225	$ 22,428	$ 30,801
Weighting			
EV derived from Sales	50%	50%	50%
EV derived from GAAP EBITDA	50%	50%	50%
Enterprise Value	$ 10,132	$ 22,621	$ 31,371
Capital Structure Adjustments			
Adjusted Net Debt - 2022E	$ (2,795)	$ (2,795)	$ (2,795)
Shares Outstanding - 2022E	395	395	395

Source: Company data, Goldman Sachs Global Investment Research

Key Downside Risks

Risks to our Buy rating include:

- Active rider growth (losing share, slower industry recovery in post-COVID world);
- Changes in consumer behavior (work from home, office commute, airport travel, expanded use cases, etc.);

- The yield/return earned on micro mobility (bikes/scooters) investments underwhelms;
- The level of driver incentives remains elevated & resulting impact on P&L;
- Potential sustained negative impact of market pricing on end demand;
- Regulation of driver classification (incl. compensation, benefits, etc.).

In addition, LYFT is exposed to the volatility caused by the global macroeconomic environment & investor risk appetite for growth stocks.

Company Description

Lyft provides multimodal on-demand transportation network that operates across the United States and Canada. The company's core offering is a peer-to-peer ridesharing marketplace, which connects riders with drivers and generates nearly all its revenues. Other services include a network of bikes and scooters (Light vehicles) for shorter trips, Express Drive (rental car service for drivers), & Lyft Rentals (consumer car rentals), among others. Lyft also has partnerships with Ford/Argo AI, Motional and Waymo to offer rides in autonomous vehicles on the Lyft network. As of the end of 2020, the company had 12.6mm active riders on its platform (vs. 22.9mm in 2019).

Uber Technologies (UBER, Buy, $64 PT): The Next "Super App" Begins to Emerge

Investment View

We are initiating coverage of Uber with a Buy rating and a 12-month $64 PT. Across its array of products, we see Uber as the next large cap platform ecosystem in our coverage universe – scale of user and economic capture around a common theme of local transportation and eCommerce. While the rate of recovery in its Mobility business and the rate of normalization in Delivery will likely dominate short-term debates among investors, we think the longer-term focus is around the flywheel effect of platform users (increasingly subscription and loyalty based). Specifically, we are bullish on the concept of how a collection of products can capture increasing wallet share across multiple end markets with secular growth & rising online penetration rates.

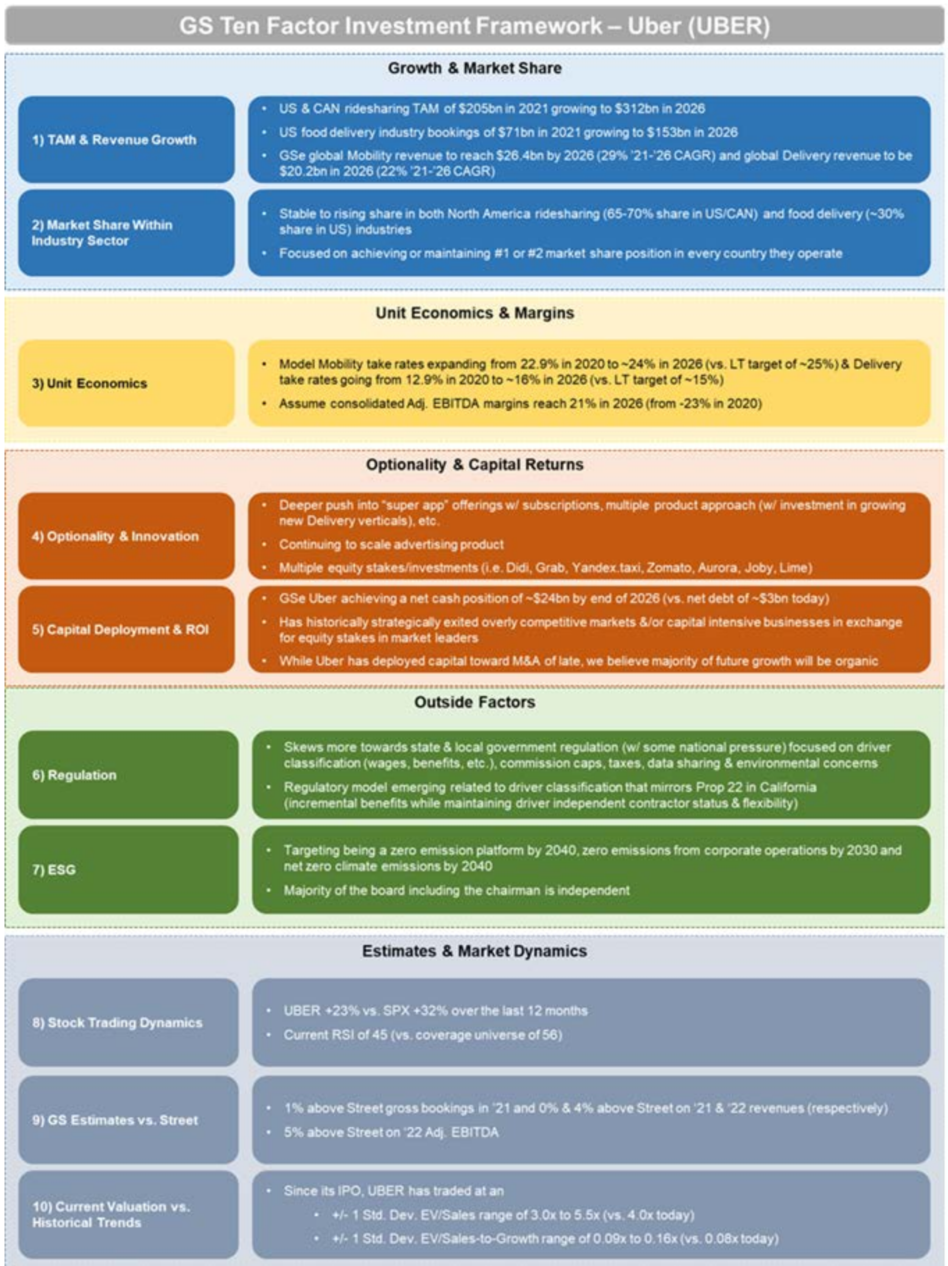
In this initiation, we frame Uber around three key debates: **1) Will Uber be able to sustain ~20% revenue growth as a '21-'26 CAGR?** Our view – Yes. We see a normalization of ridesharing end market demand by the end of 2021/beginning of 2022 and a normalization of food delivery growth dynamics in 1H22 but see multiple years of penetrating large TAMs available to Uber to sustain growth; **2) Can Uber achieve its long-term profitability targets given industry and regulatory dynamics?** Our View – Yes. We model Uber achieving 21% Adj. EBITDA margins (vs. its long-term target of 25%) & view competitive intensity and regulatory headwinds as manageable at Uber's platform scale (driven by multiple products);and **3) Will Uber be successful in non-food delivery in driving more local commerce on to its platform?** Our view – Uncertain. The short answer is we like Uber's potential to be successful in this area. The acquisitions of Cornershop (closed) and Drizly (still under review and has not closed) position Uber to continue scaling their platform into new end markets (grocery & alcohol delivery). The collection of these initiatives will reduce user churn, drive high spend per customer, driver retention will rise (as they can capture more income and less downtime) and the "super app" concept is a strategy other Internet large-caps have successfully executed.

We see UBER generating a '21-'26 revenue CAGR of 26% (driven by its multi-product strategy marrying consumer demand for transportation and local commerce with their driver network) and a 2026 Adj. EBIT margin of 21% (compared to -23% in 2020) as they build scale in operations in the coming years but remain largely focused on investments to drive a mixture of user and consumption growth in the years ahead. Uber has lagged as a stock year-to-date due a mixture of the pandemic impact on its Mobility business, open debates among investors on normalized growth and mature margins for the Delivery business long-term and an overhang from equity supply coming to market more recently. One key short-term debate will be the degree to which Uber's business mix (Mobility recovering, Delivery moderating) normalizes in the coming quarters as well as how much customer/driver incentives need to be maintained in order to balance demand with supply in the recovery.

GS Internet Investing Framework

Uber screens positively as we apply the key themes and tenets of our Goldman Sachs Internet Investing Framework, including: a) multiple large/growing TAMs, b) product innovation, b) industry leadership, c) pricing inflation dynamic and d) rising gross/operating margins in the coming years as scale builds. Uber does continue to face regulatory scrutiny over driver wages/employment status and the business model (especially commission rates) in food delivery. Our industry analysis & idiosyncratic fundamental work supports our long-term thesis.

Exhibit 253: Ten Factor Investment Framework - Uber (UBER)



Source: Company data, Goldman Sachs Global Investment Research, FactSet

Three Key Debates & Our View

Key Debate #1: Will Uber be able to sustain ~20% revenue growth as a '21-'26 CAGR?

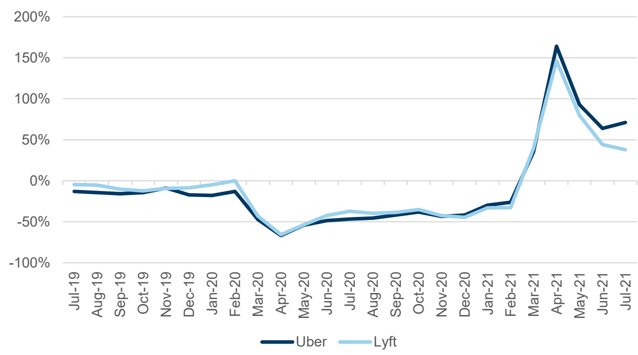
Our view – Yes. Uber has a market leading position (if not outright leadership) in almost all business segments and geographies in which it operates. Outside of a handful of overseas markets (where Uber has equity stakes in the market leader), Uber is a leader in ridesharing wherever it operates and is a top #1-3 player in food delivery (#1 in 8 of top 10 markets). One of the leading lessons of Internet investing is that leadership and scale have a compounding effect as long as management continues to execute and invest against long-term opportunities – hence our bullish stance on Uber.

With its product mix across ridesharing & delivery commerce, Uber has exposure to two long-tailed total addressable markets (TAMs). In this initiation, we have examined the TAM for both North America ridesharing and US food delivery. We see US & Canada ridesharing as a $35bn market today (which is 17% penetrated of the $205bn end market opportunity) and we see that market growing to $103bn by 2026 (still only a 33% penetration rate). We see the US food delivery market as a $71bn market today (which is 12% penetrated of total restaurant spend), which we see growing to $153bn by 2026 (still only a 22% penetration rate). On those two opportunities alone, we see a path to Uber maintaining a 20%+ '21-'26 revenue CAGR based on our forecasting.

We expect a normalization of ridesharing end market demand by the end of 2021/beginning of 2022 and a normalization of food delivery growth dynamics in 1H22 but see multiple large/growing TAMs available to Uber to sustain growth. In addition, with product innovation and launches around groceries (Cornershop acquisition), local commerce (Drizly acquisition & offline retail partnerships), rental cars and advertising, we also see upside optionality emerging for Uber as management continues to invest against long term growth. Despite its market leadership position, we still expect Uber to produce well above global GDP growth during our 5-year forecasting period.

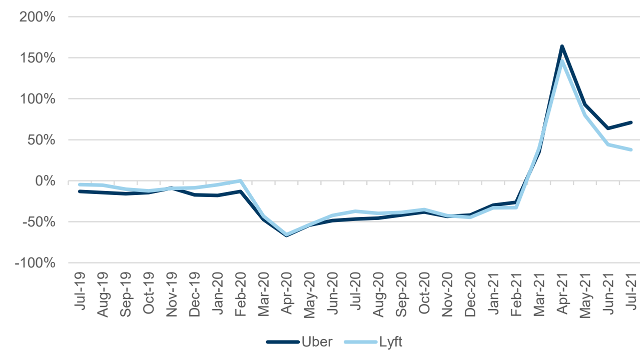
Against its two main addressable markets, we see Uber's market share as remaining stable to slightly rising in the years ahead. Within our TAM analysis, we see Uber rising from ~65% to ~70% market share in North America ridesharing in our model. In US food delivery, we see Uber moving from ~25% market share in 2020 to ~30% in 2026 (incl. Postmates acquisition). In our modeling, we forecast Uber achieving a broadly rising take rate dynamic across both segments (Mobility and Delivery) – our 5-year forecasts result in Mobility just below Uber management's long-term target of 25% take rate and Delivery at ~16%, which is slightly above Uber management's long-term target of 15% take rate for that business (tailwind from advertising). We do expect all aspects of Uber's business segments to remain with high competitive intensity in the coming years due to market structure and growth opportunities that can also be captured by other industry players. We expect this competitive intensity could manifest itself in the form of consumer pricing, marketing, driver incentives and/or new areas of growth like local commerce/logistics.

Exhibit 254: US Ridesharing Monthly App Downloads (YoY growth)



Source: SensorTower

Exhibit 255: US Food Delivery Monthly App Downloads (YoY growth)



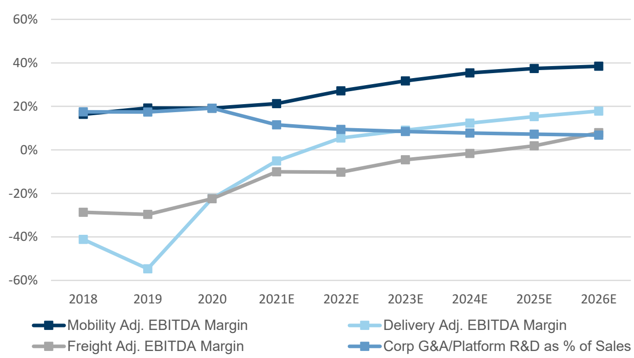
Source: SensorTower

Key Debate #2: Can Uber achieve its long-term profitability targets given industry and regulatory dynamics?

Our View – Yes. On a consolidated basis, we model Uber with a rising margin profile through the forecast period of our model. Specifically, we have Uber going from -17% GAAP EBITDA margins in 2021 (but turning profitable in 4Q21 on an Adj. EBITDA basis) to GAAP EBITDA margins rising to almost 18% in 2026 (still producing 35% YoY growth in 2026). Going back to the company's messaging from its IPO, we see Uber as a solidly profitable business over the long-term. Our current 5 year modeling has 38% Mobility Adj. EBITDA margins and 18% Delivery margins in 2026 (compared to Uber's long-term targets of 45% and 30% respectively). In the past year (as a reaction to COVID-19 demand shifts), Uber has executed against a number of cost saving initiatives that have rationalized driver incentives, user growth incentives, headcount and other fixed costs. In total, those initiatives have improve Uber's cost base by over $1bn. We see Uber turning profitable in 4Q21 as a proof point of its long-term profitability goals. However, recent messaging from management should be top of mind for investors – Uber is a growth company with multiple long-tailed TAMs and hence profitability (for its own sake) does not appear to be the primary focus. In our mind, Uber reminds us of Amazon 6-10 years ago – regular profit trajectory check-ins could stand as proof points but the main focus will remain on scaling the business' opportunities and driving product adoption globally. Despite this, Uber is committed to sustainable and growing profitability as they move forward into 2022. We see Uber generating a revenue CAGR of 26% from '21-'26 and achieving GAAP EBITDA of $9bn in 2026 (an 18% margin) and FCF (ex SBC) of $8bn. While Uber has a modest amount of leverage today, it is well capitalized for the next years and forecast Uber going from a net debt position of $3bn in 2021 to a net cash position of $24bn in 2026.

On its most recent earnings call, Uber did express that a range of outcomes (mostly tied to Mobility and COVID variants) could leave 2H21 as volatile in terms of P&L outcomes. However, management expressed confidence in terms of profit margin targets in a more "normalized" environment. In addition, where a recovery has already taken place, Uber implied that they already see a "healthy business." With consumer prices remaining well above pandemic levels in many key Mobility markets, the short-term headwind of driver incentive spend (to increase supply) seems a perfectly prudent investment to drive/maintain rider satisfaction levels. Further, one potential high margin business that is emerging within Uber is its Advertising initiative. Currently, 84k of their 750k Delivery merchants are utilizing advertising & we expect this number to rise in the coming years. Further, Uber has said they now expect to end 2022 with at least $300mm runrate advertising revenue, which would imply ~0.5% of our 2022 Delivery bookings. We estimate advertising revenue could reach ~$1.1-4.7bn by 2026 within the Delivery segment. Marrying the short-term purchase intent of Uber users with advertising budgets seems like yet another example of how the lines are blurring between traditional eCommerce and advertising models.

Exhibit 256: Uber Segment Adj. EBITDA Margins



Source: Company data, Goldman Sachs Global Investment Research

Exhibit 257: Uber Delivery - 2026 Advertising Revenue Opportunity Scenario Analysis

$mm

Delivery GBs - '20-'26 CAGR	Advertising Revenue as % of 2026 Delivery Gross Bookings								
	1.00%	1.25%	1.50%	1.75%	2.00%	2.25%	2.50%	2.75%	3.00%
23%	$ 1,064	$ 1,329	$ 1,595	$ 1,861	$ 2,127	$ 2,393	$ 2,659	$ 2,925	$ 3,191
24%	$ 1,116	$ 1,395	$ 1,675	$ 1,954	$ 2,233	$ 2,512	$ 2,791	$ 3,070	$ 3,349
25%	$ 1,171	$ 1,464	$ 1,757	$ 2,050	$ 2,343	$ 2,636	$ 2,928	$ 3,221	$ 3,514
26%	$ 1,229	$ 1,536	$ 1,843	$ 2,150	$ 2,457	$ 2,764	$ 3,071	$ 3,379	$ 3,686
27%	$ 1,288	$ 1,610	$ 1,932	$ 2,254	$ 2,576	$ 2,898	$ 3,220	$ 3,542	$ 3,864
28%	$ 1,350	$ 1,688	$ 2,025	$ 2,363	$ 2,700	$ 3,038	$ 3,375	$ 3,713	$ 4,050
29%	$ 1,414	$ 1,768	$ 2,122	$ 2,475	$ 2,829	$ 3,182	$ 3,536	$ 3,890	$ 4,243
30%	$ 1,481	$ 1,852	$ 2,222	$ 2,592	$ 2,963	$ 3,333	$ 3,703	$ 4,074	$ 4,444
31%	$ 1,551	$ 1,938	$ 2,326	$ 2,714	$ 3,102	$ 3,489	$ 3,877	$ 4,265	$ 4,652

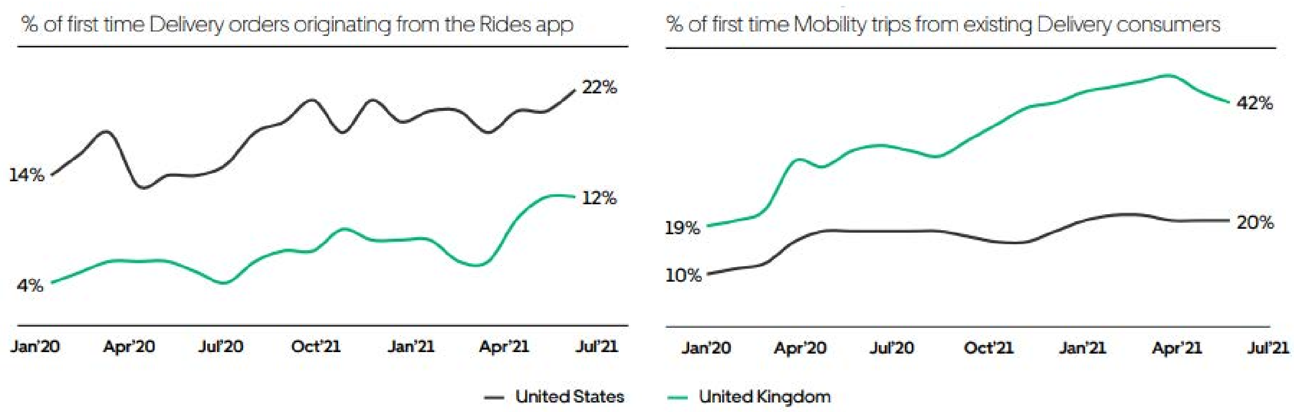
Source: Company data, Goldman Sachs Global Investment Research

Key Debate #3: Will Uber be successful in non-food delivery in driving more local commerce on to its platform?

Our view – Uncertain. The short answer is we like Uber's potential to be successful in this area. The acquisitions of Cornershop and Drizly position Uber to continue scaling their platform into new end markets. The collection of these initiatives will reduce user churn, drive high spend per customer, driver retention will rise (as they can capture more income and less downtime) and the "super app" concept is a strategy other Internet large-caps have successfully executed. In its most recent earnings call, Uber provided a series of interesting stats that we think investors should keep top of mind: 1) Uber Pass members already drive 25% of Delivery Gross Bookings (30% in US); 2) cross-platform consumers active on both Mobility and Delivery drive 44% of Uber's total company Gross Bookings; 3) ~20% of first time Mobility trips in the US, and more than 40% of first time trips in the UK, were existing Delivery consumers; and 4) over 20% of first time Delivery orders in the US, and more than 10% of first time orders in the UK, were originated from the Rides app.

If we were to summarize this dynamic, Uber has multiple long-tailed market opportunities (which are still in the early innings), a leading position in those markets, an engaged and increasingly multi-product consumer base and a rising base of subscription users which can reduce acquisition costs and allow for the emergence of layering on new business segments against that base of consumption. That being said, the dynamic and volatility on that emerging remains a work in progress.

Exhibit 258: Uber's Cross-platform Consumer Acquisition



Source: Company reports

GS Estimates vs. Consensus

In our modeling, we are tracking roughly inline to slightly ahead with Street estimates on revenue & EBITDA over our 5 year forecast horizon ('21 to '26). We see room for upside in our modeling of Uber's revenues should a faster recovery in the Mobility segment come to fruition as well as local commerce & advertising revenue over the long-term in the Delivery segment.

Exhibit 259: Uber - GS Estimates vs. Consensus

	Q3 2021			2021			2022		
	GS Est	Cons Est	% GS vs. Cons	GS Est	Cons Est	% GS vs. Cons	GS Est	Cons Est	% GS vs. Cons
Trips (m)	1,790	1,720	4%	6,743	$ 6,663	1%	8,701	$ 8,689	0%
MAPCs (m)	109	111	-2%	107	$ 118	-10%	133	$ 135	-2%
Gross Bookings	$ 23,996	$ 23,410	3%	$ 90,979	$ 90,407	1%	$ 118,824	$ 117,424	1%
Mobility	$ 10,823	$ 10,110	7%	$ 38,572	$ 36,828	5%	$ 54,910	$ 52,215	5%
Delivery	$ 12,782	$ 13,070	-2%	$ 50,959	$ 52,202	-2%	$ 62,062	$ 63,175	-2%
Freight	$ 392	$ 406	-4%	$ 1,448	$ 1,478	-2%	$ 1,851	$ 2,068	-10%
Revenue	$ 4,496	$ 4,436	1%	$ 16,201	$ 16,274	0%	$ 23,614	$ 22,728	4%
Mobility	$ 2,165	$ 2,067	5%	$ 7,308	$ 7,123	3%	$ 12,532	$ 11,301	11%
Delivery	$ 1,943	$ 1,927	1%	$ 7,439	$ 7,655	-3%	$ 9,236	$ 9,401	-2%
Freight	$ 389	$ 396	-2%	$ 1,445	$ 1,455	-1%	$ 1,847	$ 2,086	-11%
GAAP Gross Profit	$ 2,354	$ 2,363	0%	$ 8,031	$ 8,261	-3%	$ 12,930	$ 12,952	0%
GAAP EBITDA	$ (353)	$ (492)	-28%	$ (2,766)	$ (2,883)	-4%	$ 377	$ 93	306%
Adj. EBITDA	$ (96)	$ (107)	-10%	$ (844)	$ (834)	1%	$ 1,497	$ 1,428	5%
GAAP EPS	$ (0.34)	$ (0.39)	-13%	$ (0.00)	$ (0.21)	-99%	$ (0.36)	$ (0.56)	-36%

Source: FactSet, Goldman Sachs Global Investment Research

Valuation & Risk/Reward Framework

Referencing our broader valuation framework, we apply the two-pronged approach for growth companies (~20%+ revenue growth in the forward 2-3 years) to our UBER 12-month price target. Our $64 price target is based on an equal blend of: (1) EV/Sales applied to our 2023 estimates and; (2) a modified DCF using an EV/GAAP EBITDA multiple applied to our 2026 estimates discounted back 3 years. In addition, we add the asset value of Uber's stakes in Didi, Grab, Yandex.taxi, Zomato, Aurora, Lime and Joby (including a 15% holding company discount). Specifically:

- 3.5x EV/Sales (or 0.10x EV/Sales-to-growth) applied to our FY23 estimates. This compares to a comp set of digital marketplace peers that have historically traded in a +/- 1 standard deviation range of 2.9x-5.5x EV/Sales on an absolute basis (or 0.16x-0.25x on an EV/Sales-to-Growth basis)
- 19.5x EV/GAAP EBITDA multiple applied to our FY26 estimates discounted back 3 years at 12%. The discount rate represents CAPM using the blended average of companies within our coverage universe consisting of: (1) 3% risk free rate (based on the normalized 10-year rate); (2) average beta of ~1.3; (3) equity risk premium of 7%. We'd note this implies an EV/GAAP EBITDA-to-Growth of ~0.6x on 2026 GAAP EBITDA growth, which compares to digital marketplace peers at a historical +/-1 std. dev. range of 0.8x-1.0x on a one-year forward basis.

Exhibit 260: Uber Price Target Analysis
$mm expect per share data

Scenario Analysis	Downside	Base	Upside
Valuation	$ 25	$ 64	$ 90
% upside/downside	-39%	56%	120%
Sales (FY22E)	$ 21,253	$ 23,614	$ 25,976
Downside/Upside Adjustment	-10%	-	10%
Sales (FY23E)	$ 26,325	$ 29,914	$ 33,504
Downside/Upside Adjustment	-12%	-	12%
EV / 2023 Sales	2.0x	3.5x	5.0x
Sales CAGR ('21-'23)	27.5%	35.9%	43.8%
EV / Sales to Growth	0.07x	0.10x	0.11x
Enterprise Value	$ 52,649	$ 104,700	$ 167,520
GAAP EBITDA (FY26E)	$ 6,572	$ 8,934	$ 9,353
GAAP EBITDA Margin %	13.0%	17.7%	18.5%
EV / 2026 GAAP EBITDA	12.0x	19.5x	23.0x
GAAP EBITDA CAGR ('23-'26)	41.9%	57.2%	59.6%
EV / GAAP EBITDA-to-Growth	0.29x	0.34x	0.39x
Discount Rate	15%	12%	10%
Discount Period (Years)	3	3	3
Enterprise Value (2025)	$ 78,865	$ 174,219	$ 215,110
Discounted Enterprise Value (2022)	$ 51,855	$ 124,006	$ 161,615
Weighting			
EV derived from Sales	50%	50%	50%
EV derived from GAAP EBITDA	50%	50%	50%
Enterprise Value	$ 52,252	$ 114,353	$ 164,568
Capital Structure Adjustments			
Adjusted Net Debt - 2022E	$ 1,981	$ 1,981	$ 1,981
Investments & JVs	$ -	$ 15,690	$ 15,690
Non-Controlling interests	$ 1,569	$ 1,569	$ 1,569
Shares Outstanding - 2022E	1,967	1,967	1,967

Source: Company data, Goldman Sachs Global Investment Research

In order to value Uber's investments & JVs, we apply Uber's ownership stake (per disclosure) to a mix of current public market valuation (Didi & Joby), Goldman Sachs Global Investment Research estimates (Yandex.taxi from Vyacheslav Degtyarev's YNDX SOTP & Zomato [covered by Manish Adukia - Initiation]), press reports (Lime & Aurora) & company investor presentations (Grab). We then apply a 15% holding company discount, which results in an aggregate value of ~$16bn.

Exhibit 261: Uber's Investments & JVs included in Valuation

$mm

Investments & JVs	Value	Uber's % Ownership	Discount Rate	Uber's Share
Didi	$ 43,500	12%	15%	$ 4,400
Yandex	$ 9,194	33%	15%	$ 2,579
Grab	$ 39,552	14%	15%	$ 4,808
Lime	$ 510	31%	15%	$ 134
Joby	$ 6,150	6%	15%	$ 314
Aurora	$ 10,000	26%	15%	$ 2,210
Zomato	$ 18,784	8%	15%	$ 1,245
				$ 15,690

Source: Company data, FactSet, Goldman Sachs Global Investment Research

Further, we include a SOTP valuation framework as both a sanity check and to help frame implied valuation of various parts of the business based on our assumptions.

Exhibit 262: UBER Sum-of-the-Parts

	2021E		2023E		'21E-'23E CAGR					
	Bookings	GAAP Sales	Bookings	GAAP Sales	Bookings	GAAP Sales	Multiple	Multiple-to-Growth	EV	Notes
Mobility (North America)	$ 23,423	n/a	$ 43,088	n/a	36%	n/a	1.2x Bookings	0.03x	$ 51,706	Compares to comp set of digital marketplaces that have historically traded in a range of 0.6x-1.4x forward EV/GMV (or 0.02x-0.11x EV/GMV-to-Growth). Uber's NA Mobility EV/Gross Bookings multiple is roughly inline with multiple implied by our valuation for LYFT
Mobility (ex-North America)	$ 15,149	n/a	$ 26,453	n/a	32%	n/a	0.9x Bookings	0.03x	$ 23,808	Slightly lower than multiple used for North America given more intense competitive environment from global players (i.e. Didi, Ola, etc.)
Delivery (US)	$ 20,384	$ 3,261	$ 28,690	$ 4,877	19%	22%	0.8x Bookings	0.04x	$ 22,952	Compares to comp set of food delivery companies that have historically traded in a range of 0.7x-1.3x forward EV/GMV (or 0.03x-0.05x EV/GMV-to-Growth). Further, value implies EV/Sales of 4.7x (0.21x to-Growth) which compares to historical trading range of food delivery comp set of 4.4x-8.0x (or 0.14x-0.28x EV/Sales-to-Growth).
Delivery (ex-US)	$ 30,576	$ 4,178	$ 46,811	$ 6,510	24%	25%	0.6x Bookings	0.03x	$ 28,086	Slightly lower than multiple used for US given less mature international markets, more intense competitive environment from global players and varying market share positioning. Further, value implies EV/Sales of 4.3x (0.17x to-Growth).
Freight	$ 1,448	$ 1,445	$ 2,314	$ 2,308	26%	26%	1.2x Sales	0.05x	$ 2,770	Marked to market for Greenbriar investment (received $500m investment at post-money valuation of $3b, which implies Uber's share is worth $2.8b). Freight brokerage companies (CHRW & ECHO) have traded at an EV/Sales multiple range of 0.5x-0.7x (0.04x-0.16x to-Growth)
Investments & JVs									$ 15,690	Includes equity stakes in Didi, Grab, Yandex.taxi, Zomato, Lime, Joby, Aurora. For Didi and Joby we use their public market value. For Yandex.taxi, we use GSe published valuations. For Grab, we use estimated value per their investor deck announcing SPAC deal. For Lime & Aurora, we use press reports per latest funding round. We further apply a 15% holding company/liquidity discount to Uber's stake.
Non-controlling interests									$ (1,569)	
SBC		$ (1,069)		$ (1,243)			12.0x EBITDA		$ (14,921)	
Enterprise Value									**$ 128,522**	
Net Debt (Cash)									$ 1,981	
Market Value									**$ 126,541**	
Diluted Share Count (2022E)									1,967	
Market Value per Share									**$ 64**	
% Upside/Downside									*56%*	

Source: Company data, FactSet, Goldman Sachs Global Investment Research

In addition to our base case PT, we arrive at an upside/downside valuation scenario analysis by stress testing our base case operating estimates (revenue & GAAP EBITDA) and applying a range of higher/lower multiples. Our applied upside/downside multiples on revenue & GAAP EBITDA (discounted back) results in an upside/downside skew of ~3:1 from current levels.

Key Risks

Risks to our Buy rating include:

- Slower recovery in Mobility in a post-COVID environment (airport rides, business travel, use case in major cities, slower disruption in car owning communities);

- Regulatory environment around driver classification (incl. compensation, benefits, etc.), merchant commission caps, ESG, etc.;
- Competitive forces in both Mobility and Delivery (incl. local commerce/logistics);
- Tougher comps for Delivery in a post-COVID environment (indoor dining, meals cooked at home);
- Profitability timeline is pushed out or more volatile due to a mix of rising competition and/or growth focus;

In addition, UBER is exposed to the volatility caused by the global macroeconomic environment & investor risk appetite for growth stocks.

Company Description

Uber is a global mobility and logistics platform that facilitates the transportation of people & goods (prepared food, groceries, freight, etc.), operating across the US, Canada, Latin America, Europe, the Middle East, Africa, and Asia (excluding China & SE Asia). Specifically, the platform operates in ~10,000 cities across 71 countries. Within its core Mobility product, Uber's products connect consumers with Drivers who provide rides in a variety of vehicles, such as cars, auto rickshaws, motorbikes, minibuses, or taxis. Mobility accounted for 46% of total gross bookings in 2020 (vs. 76% in 2019). In its Delivery offering, consumers can search for and discover local restaurants, order a meal, and either pick-up at the restaurant or have the meal delivered. In certain markets, Delivery also includes grocery and convenience store delivery. Delivery accounted for 52% of gross bookings in 2020 (vs. 22% in 2019). Uber also provides freight services through its offering Uber Freight, which accounted for 2% of gross bookings in 2020 (vs. 1% in 2019).

Disclosure Appendix

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We, Eric Sheridan, Ben Miller, Lane Czura, Alex Vegliante, CFA and Kate Wang, hereby certify that all of the views expressed in this report accurately reflect our personal views about the subject company or companies and its or their securities. We also certify that no part of our compensation was, is or will be, directly or indirectly, related to the specific recommendations or views expressed in this report.

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Growth is based on a stock's forward-looking sales growth, EBITDA growth and EPS growth (for financial stocks, only EPS and sales growth), with a higher percentile indicating a higher growth company. **Financial Returns** is based on a stock's forward-looking ROE, ROCE and CROCI (for financial stocks, only ROE), with a higher percentile indicating a company with higher financial returns. **Multiple** is based on a stock's forward-looking P/E, P/B, price/dividend (P/D), EV/EBITDA, EV/FCF and EV/Debt Adjusted Cash Flow (DACF) (for financial stocks, only P/E, P/B and P/D), with a higher percentile indicating a stock trading at a higher multiple. The **Integrated** percentile is calculated as the average of the Growth percentile, Financial Returns percentile and (100% - Multiple percentile).

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