Americas Technology: Internet

Creator Economy Primer: Assessing the Emerging Creator Economy & Short-Form Video Landscape

As a successor to the rise of traditional social media in the early 2010s, the emergence of the creator economy, including more scale/influence for individuals, preference for user-generated content & rich media formats (incl. short-form video) and economics/ownership flowing toward individual creators has given rise to new platforms, products and monetization/business models over the last several years. With this report, we introduce a primer on the creator economy, including sizing the TAM opportunity, outlining the current landscape (key platforms, forms of monetization, etc.), key growth drivers and which platforms we see as best positioned to capitalize on this emerging theme.

We estimate the creator economy currently represents a \$250bn TAM that can grow at a ~14% '22-27E CAGR to reach ~\$480bn by 2027. This is based on the number of global creators growing at a ~14% '22-'27E CAGR and an estimated average income dispersion per creator. We also outline & analyze the primary vehicles of monetization within the creator economy: **1**) ad revenue share (particularly ad-supported short-form video); **2**) brand-direct deals (influencer/affiliate marketing); & **3**) audience-direct monetization (tipping, subscriptions, etc.). In our view, the platforms that are best positioned to attract both creators and wallet share are those that can offer multiple forms of monetization, including some components of ad-supported revenue sharing (e.g. YouTube's Partner Program), facilitating influencer marketing on-platform (e.g. Meta's Creator Marketplace), and offering tools for direct monetization (tipping, gifting, etc.).

With respect to the ad revenue share monetization model specifically, we see the primary driver of growth within this segment being the continued rise of short-form video (both engagement and monetization) over the next several years - as a result, we introduce a framework to size both the forward revenue opportunity and headwind to-date for **Instagram Reels (META)** and **YouTube Shorts (GOOGL)**. We estimate Instagram Reels revenues can grow at a ~63% '22-'27E CAGR and scale from ~\$1.8bn in 2022 (or ~4% of total IG ad revenues) to ~\$4.0bn in 2023 (or ~8%) and ~\$20.5bn in 2027 (or ~23%). For GOOGL, we estimate YouTube Shorts will generate ~\$750mm of revenues in 2023 (or ~2.5% of total YouTube Ads revenues) and grow at a ~98% '23-'27E CAGR to reach \$11.6bn in 2027 (or ~26% of total).

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More broadly, we highlight six characteristics that we believe will allow platforms to create a "flywheel effect" of attracting scale of creators, users and monetization (which we discuss in more detail below): **1**) scale of audience; **2**) access to large pools of capital to fund monetization; **3**) strong Al-powered recommendation engines; **4**) effective monetization tools; **5**) robust data & analytics; & **6**) elements of shopping/commerce. Based on this framework (& irrespective of our current stock ratings), we highlight META, GOOGL, AMZN, SPOT & RBLX as the most exposed to the secular growth dynamic and thematic components of the creator economy over the medium-to-long-term.

We recognize some potential headwinds/risks that could impact the growth outlook for the creator economy over the short-to-medium term: macroeconomic headwinds & resulting impact to advertising budgets (particularly upper-funnel/brand spend); rising interest rates pressuring venture funding of new platforms; cost-cutting initiatives by large platforms (potentially limiting product innovation and/or creator payouts); and weaker consumer spending. That being said, we see the continued emergence of the creator economy & short-form video as secular tailwinds that can drive growth for platforms over the long-term.

Which Platforms Are Best Positioned?

Despite the emergence of new/niche-specific platforms and web 3.0 concepts over the past 2-3 years, we still view the large/scaled incumbent platforms as best positioned to capitalize on this theme over the long-term. An increasing number of creators, macroeconomic headwinds impacting brand spend, rising interest rates pressuring private company/new platform funding and the fragmentation of user engagement are all driving heightened competition for creators to achieve scale/virality and build meaningful brands. As a result, we expect some element of a "flight to quality" whereby creators will prioritize platforms with stability, scale & monetization potential.

We see 6 primary characteristics that will allow platforms to attract creators and achieve scale in the current environment. The platforms that will be most successful, in our view, are those that can offer creators:

- 1. Scale a large, global user base with diversified interests/niches;
- Access to large pools of capital to fund monetization either through a diversified revenue base and/or as part of a larger parent company;
- Strong Al-powered recommendation engines the ability to surface relevant content and match creators to interested users;
- Effective monetization tools a variety of product offerings/payout structures for creators to diversify income streams;
- 5. Robust data & analytics transparency on engagement stats, retention, conversion rates, etc.; &
- 6. Elements of shopping/commerce integrated into core user experience

Below we analyze publicly traded companies under our coverage through the prism of these six factors with a strong emphasis on characteristics #1 (size of platform audience) & #2 (size of available capital i.e. revenue base of platform and/or parent company). With this framework in mind, we highlight that, based on current positioning, **YouTube (GOOGL)** and **Instagram (META)** are best positioned in our view to capitalize on the growing creator economy over the next several years.

Alphabet (GOOGL, Buy, \$128 PT) - Key elements include: Scale of global audience; industry-leading Al/ML capabilities driving content recommendation/discovery engine; scaled 1P data (via logged-in user base) across portfolio of O&O platforms (Search, YouTube, Gmail, Maps, Android/Play store, Workspace, etc.); industry-leading creator payout model via YouTube Partner Program; prominent short-form video platform (YouTube Shorts) with scaling usage/engagement and monetization; iterating around elements of shopping/commerce (Google Shopping; direct-response efforts within YouTube) and new creator monetization tools (tipping/virtual goods e.g. Super Thanks, Super Chat, Super Stickers, etc.); industry-leading network of advertisers to source brand-direct deals with creators; diversification of content niches on YouTube; access to large pool of capital to support creators (large, diversified revenue base).

Meta Platforms (META, Buy, \$215 PT) - Key elements include: Scale of global audience; industry-leading AI/ML capabilities driving content recommendation/discovery engine; scaled 1P data (via logged-in user base) across O&O platforms (Facebook, Instagram, WhatsApp, Horizon, etc.); prominent short-form video platform (Reels) with scaling usage/engagement and monetization; iterating around elements of shopping/commerce (Facebook/Instagram Shops, direct checkout) and new creator monetization tools (virtual gifts e.g. badges); industry-leading network of advertisers to source brand-direct deals with creators; access to large pool of capital to support creators (large revenue base); exposure to long-term computing platform shifts incl. the metaverse.

Amazon (AMZN, Buy, \$145 PT) - Key elements include: Scale of global audience; scaled 1P data (via Prime subscribers); prominent digital video/live streaming platform (Twitch) with scaling usage/engagement and monetization; unique creator monetization offerings across all three categories (platform payout: ad revenue share on Twitch; brand-direct: affiliate marketing on Amazon and brand sponsorship on Twitch; audience-direct: subscriptions & virtual goods/gifting on Twitch); elements of shopping/commerce; access to large pool of capital to support creators (large, diversified revenue base).

Spotify (SPOT, Neutral, \$111 PT)- While we remain Neutral rated on Spotify (as we see a balanced risk/reward skew on current shares), we see the platform as well positioned to benefit from the growing creator economy over the long-term within the streaming media/audio vertical. **Key elements include:** Scale of global audience & 1P data via logged-in user base; industry-leading AI/ML recommendation engine for surfacing relevant content; large payout model (via music licensing payouts); creator-focused product innovations, including new "card"-based Discover homepage; testing new creator tools for content generation (podcasting) & monetization (creator marketplace to connect brands & podcasts; ticketing/concert sales, merchandising, etc.).

Roblox (RBLX, Sell, \$21) - While we remain Sell rated on Roblox (as we see a more negative risk/reward skew on current shares), we do see Roblox as well positioned to benefit from this secular growth theme over the long-term within the gaming/interactive entertainment vertical. **Key elements include:** scale of global audience; unique creator monetization offerings across multiple categories (brand-direct: sponsorship opportunities; audience-direct: paid access to content via subscriptions and/or direct purchases, virtual goods, etc.); exposure to long-term computing platform shifts incl. the metaverse.

Private Companies: In addition to the public companies under our coverage, we highlight several private companies within the creator economy landscape, including (in alphabetical order): **1) Cameo** (marketplace for digital 1x1 content between creators and individuals); **2) Discord** (offers a number of tools/monetization services for creators across messaging & video organized within dedicated "servers); **3) Epic Games** (enables digital asset creation & development tools through Unreal Engine and distribution/monetization of content/digital experiences via Fortnite); & **4) Patreon** (platform for exclusive content distribution and monetization, primarily through paid subscriptions, between creators and fans). See <u>Exhibit 17</u> for a more comprehensive list of companies and details on product offerings across the creator economy landscape.

What Is The Creator Economy?

The creator economy is an ecosystem whereby individuals create content for digital consumption with the goal of building an audience base and monetizing their brand. It represents a multi-year shift away from professional content by traditional brands/networks and toward user-generated content though which more influence and monetization potential is held by individuals. Creators mostly create content and build their brand leveraging individual platforms and, while the relationship between creators and platforms differ widely, platforms often help creators scale their audiences and monetize their brands.

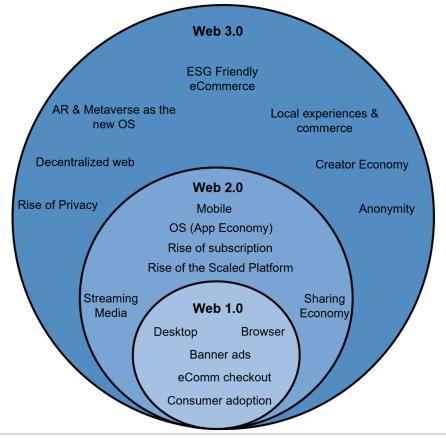
Shifting media consumption habits (including short-form video, user-generated content, live streaming, etc.) and the **evolution of web 3.0 concepts** (decentralized ownership, lower barriers to content creation, niche industry subcategories, etc.) have fueled growth of the creator economy in recent years. This has driven both to traditional web 2.0 platforms to invest heavily in new products/features (often at the expense of existing business models) and the emergence of new creator-focused platforms.

As we have laid out in detail in prior research (link | link), the rise of Web 3.0 (the "decentralized web") saw significant momentum over the past several years, particularly during the COVID-19 pandemic period. This includes key principles such as: a) more control by the user of their data; b) a more micro focus (i.e. mean reversion on scale, either in end market being tackled or in relationship between the platform and the user); c) the rise of individuals as creators and creators looking to monetize their content more directly with "fans"; d) increasing decentralization (the eventual breakdown of the mobile operating system app store distribution model seems like a 5-10 year development worth monitoring); & e) flexibility/innovation around payment mechanisms aimed at a mix of themes (decentralized privacy and anti-establishment).

Despite us highlighting this as a key theme in 2021 (link) & 2022 (link) and while we still expect this to be an important theme over the long-term, the shift from Web 2.0 to Web 3.0 appears to be happening slower than originally anticipated ~1-2 years ago as we expect many of the well-established platforms to maintain strong influence going forward. While we recognize that the early innings of this shift in part caused some of the major platforms to shift business models (META prioritizing Reels and shifting from social graph to discovery engine; GOOGL promoting YouTube Shorts at the expense of long-form video; etc.), we see these shifts as having been largely successful and now position these platforms well to maintain scale in the emerging landscape going forward. Many of these principles of Web 3.0 discussed above (control/transparency around user data; more micro-focus; rise of individual creators & direct monetization capabilities; etc.) are in fact being led by the incumbent "Web 2.0" platforms. In addition, we expect a number of factors (the current macroeconomic environment impacting ad spend/consumer spending and limiting direct creator monetization; lack of momentum around private funding for smaller platforms due to higher interest rates & other macro headwinds; cost-cutting efforts by smaller platforms leading to less new entrants into the creator economy and a lower degree of platform innovation; etc.) to

lead to a "flight to quality" whereby creators prioritize the large-scaled incumbent platforms. As a result, while we still anticipate the shift to Web 3.0 will occur over the long-term, we expect incumbent "Web 2.0" platforms to be the primary beneficiaries of the secular tailwinds around the creator economy over the next ~3-5+ years.

Exhibit 1: Evolution of Decentralized Web



Source: Company data, Goldman Sachs Global Investment Research

What Does a Typical Creator Look Like?

According to Adobe's Creators in the Creator Economy study (<u>link</u>) across several major countries, the largest cohort of creators by generation are millennials (~40-45% of creators), while Gen-Z represents a smaller but growing portion (at ~10-15%). Creators are roughly split evenly between male and female with differing trends by country.

Exhibit 2: Creators by Generation

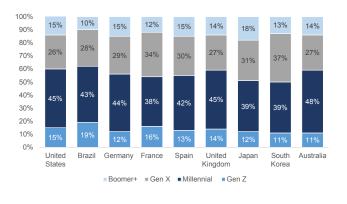
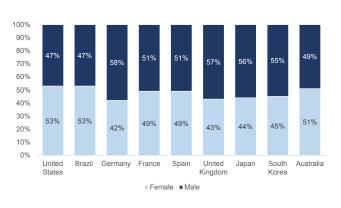


Exhibit 3: Creators by Gender



Source: Adobe, Data compiled by Goldman Sachs Global Investment Research

Source: Adobe, Data compiled by Goldman Sachs Global Investment Research

Looking more broadly, we can categorize creators by 1) size (i.e. scale of audience/follower base); 2) niche (i.e. category-focus); and 3) medium (i.e. type of content):

Size: Unsurprisingly, creators with the largest follower count, despite having the largest absolute reach & level of engagement, typically have the lowest rate of engagement (as defined by the % of total followers that like, comment or click on a post). According to Grin (link), "mega/celebrity" creators (i.e. those with 1m+ followers) see an average engagement rate of ~1%. In recent years (& largely attributed to the rise of TikTok), the number of smaller/niche creators has increased and, as a result, advertisers have shifted more spend toward these creators seeking higher ROIs. Smaller creators often have the benefit of a more concentrated or niche-specific audience base, more direct connection with their followers and are less expensive (resulting in relatively higher ROIs for advertisers at the expense of mass scale).

Exhibit 4: Follower Size and Ideal Engagment Rates

			Eng	gagement Ra	tes	
Influencers	Followers	Instagram	TikTok	YouTube	Facebook	Twitter
Nano	1k-10k	5.0%	18.0%	3.5%	2.0%	1.0%
Micro	10k-100k	3.5%	12.0%	3.0%	1.5%	0.8%
Macro	100k-1m	2.0%	8.0%	2.0%	1.3%	0.5%
Mega/Celebrity	1m+	1.0%	4.0%	1.5%	1.0%	0.5%

Data collected: 12/8/2022

Source: Grin, Data compiled by Goldman Sachs Global Investment Research

Niches: Beyond size, creators often focus on a specific vertical or category for on-platform content to build a trusted community or niche. Common niches include beauty, health & fitness, travel, fashion, business, lifestyle, gaming, animals, relationships, and parenting (with many sub-niches in each category). Data from National Research Group shows that the most popular interest categories for viewers of creator content are pop culture, sports, infotainment, games & lifestyle, with differing demographic trends & platforms for each.

Exhibit 5: Average User Demographics of Top Creator Category "Niches"

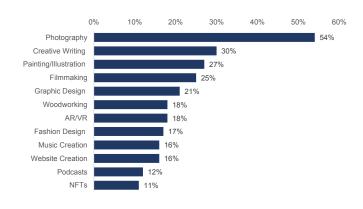
Niches	Avg Age	% Male	% Female	Top Platforms
Pop Culture	25	35%	65%	YouTube, TikTok, Snapchat, Instagram
Sports	28	81%	19%	YouTube, Instagram, Twitter, Twitch
Infotainment	34	65%	35%	YouTube, Facebook, Twitter, Reddit
Games	25	67%	33%	Twitch, Reddit, Youtube
Lifestyle	32	14%	86%	YouTube, Instagram, Facebook, TikTok

Source: National Research Group, Data compiled by Goldman Sachs Global Investment Research

Mediums: According to Adobe, the average creator creates content across 2.8 different mediums, with the most popular being photography.

Exhibit 6: Creator Content by Medium

Q: "Which of the following activities have you created products, works, materials, etc., in the past 12 months?"



Source: Adobe, Data compiled by Goldman Sachs Global Investment Research

Sizing The Creator Economy

The creator economy has grown at a rapid pace over the last several years driven by a) increase in overall digital media consumption (particularly during the COVID-19 pandemic); b) the emergence of new platforms (e.g. TikTok) and new formats from legacy platforms (e.g. Facebook/Instagram Reels; YouTube Shorts, etc.) heavily incentivizing new creators, particularly the long-tail of smaller, "nano" creators; & c) a sizable increase in private funding of companies centered around the creator economy since 2019.

Based on assumptions around the total number of creators globally and an average annual gross income per creator, **we estimate the creator economy is currently a ~\$250bn TAM that can grow at a ~14% '22-'27E CAGR to ~\$480bn by 2027.** We anticipate growth of this TAM to largely track global digital advertising spend given the fact that we expect both influencer marketing spend and platform payouts fueled by the monetization of short-form video platforms via advertising to be two primary growth drivers of the creator economy - for context, we currently estimate global (ex-China) digital advertising spend will grow at an ~11% '22-'26E CAGR.

Our TAM estimate assumes there are currently ~50mm creators globally (based on data from a Zippia study – <u>link</u>) which we further categorize as ~4% being "professional" creators (based on a Forbes study [<u>link</u>] which estimates there are ~2m global creators that make at least \$100k/year) and the remainder (~96%) being "amateur" creators. We then apply an average annual income of \$100k for "professional" creators and \$1k for "amateur" creators - these assumptions on average annual earnings per creator (and the wide disparity between top-earning and average creators) is supported by a survey by Influencer Marketing Hub (<u>link</u>, <u>Exhibit 7</u>) that indicates the majority of creators globally make <\$10k per year, with a significant portion making <\$1k per year. Going forward, we assume the total number of creators globally grows at a 10-20% 5-year CAGR (from 50mm today) and the % mix of "professional" creators remains ~flat (flexing from 3-5% of total creators). To put our assumed 5-year CAGR range in perspective, a recent Adobe study (<u>link</u>) estimates that the total number of creators across 9 core markets (US, Brazil, Germany, France, Spain, UK, Japan, South Korea & Australia) has grown ~120% from 2020 to 2022.

Exhibit 7: Average Creator Income by Years of experience

	Years of Experience												
	<1 Year	1-2 Years	2-3 Years	3-4 Years	>4 Years								
Under \$1K	53%	35%	23%	22%	17%								
\$1k-\$10k	26%	36%	26%	25%	19%								
\$10k-\$25k	10%	14%	18%	18%	17%								
\$25k-\$50k	3%	9%	14%	15%	11%								
\$50k-\$100k	1%	5%	12%	7%	19%								
\$100k-\$500k	6%	1%	6%	8%	12%								
\$500k-\$1m	0%	0%	1%	4%	2%								
\$1m+	0%	1%	1%	2%	2%								

Source: Influencer Marketing Hub

Exhibit 8: TAM Assumption

	<u>2</u>	022
Est. Total # of Global Creators (mm)		50
Creators making >\$100k (mm)		2
Penetration		4%
"Amateur" Salary		\$1,000
"Professional" Salary	\$1	00,000
Current Implied TAM (\$bn)	\$	248

Source: Zippa, Forbes, Influencer Marketing Hub, Goldman Sachs Global Investment Research

\$bn

Exhibit 9: Creator Economy TAM (2027)

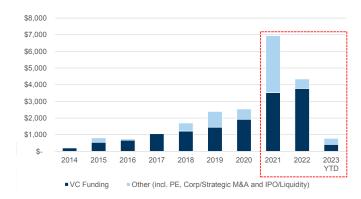
			Percentage	e of Creators E	Earning >\$100	k
S		3.0%	3.5%	4.0%	4.5%	5.0%
eato	10%	\$320	\$360	\$399	\$439	\$479
al Cr iR)	12%	\$350	\$393	\$437	\$481	\$524
3lob: CAG	14%	\$382	\$430	\$478	\$525	\$573
# of Global Creators (5-yr CAGR)	16%	\$417	\$469	\$521	\$573	\$625
# 0	18%	\$454	\$511	\$567	\$624	\$681

Source: Goldman Sachs Global Investment Research, Zippa, Forbes

Weaker Private Funding Environment to Slow "Web 3.0" Shift, Benefiting Large Incumbent Platforms

As described above, the emergence of many Web 3.0 concepts accelerated in late 2020 through early 2022 as stay-at-home pandemic restrictions fueled an increase in online user engagement and new creators. Following this trend was a sizable increase in private market investment centered around the creator economy - according to Pitchbook, private companies related to the creator economy raised a cumulative ~\$11.9bn between 2019-2021, ~3x and ~11x the amount raised between 2016-2018 and 2013-2015, respectively. Over the last 12-18 months, however, a number of factors (rising interest rates, macroeconomic headwinds, etc.) have driven a significant slowdown in the level of private investment and has stalled momentum around these themes - total capital invested in content creation/creator platforms was ~\$4.3bn in 2022 and only ~\$775mm in 2023 YTD, down from the peak of ~\$7.0bn in 2021. We expect this to benefit the large-scaled incumbent platforms (**META, GOOGL, AMZN**, etc.) with access to large pools of capital to fund creator monetization and as smaller emerging platforms face greater difficulty accessing the funding needed to drive scale.

Exhibit 10: Total Capital Raised by Creator Platforms \$mm



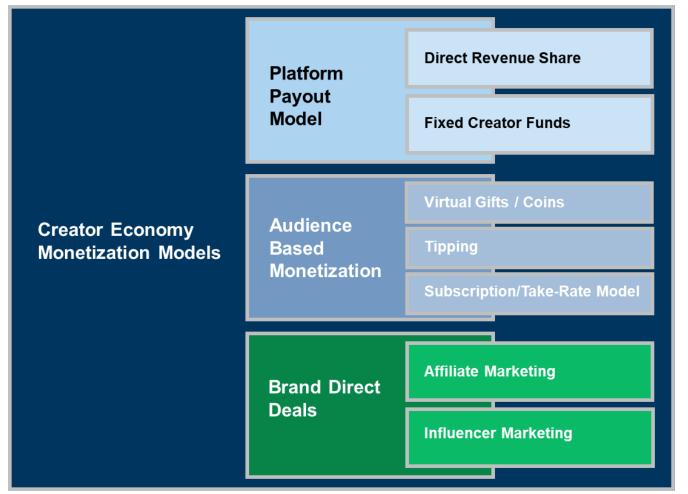
Reflects total capital raised by companies labeled under following categories: "Content Creator"; "Creator Platform" and "Creator Economy"

Source: Pitchbook, Data compiled by Goldman Sachs Global Investment Research

Monetization In The Creator Economy

We categorize creator monetization opportunities into three categories: **1) platform payout models**; **2) brand-direct deals (influencer/affiliate marketing)**; & **3) audience-based monetization**.





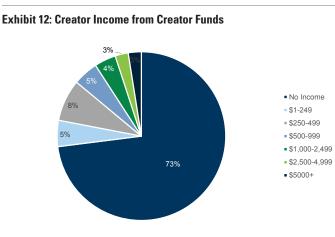
Source: Goldman Sachs Global Investment Research

Platform Payout Models:

Represents creators monetizing via direct payments from the platform itself. We'd highlight two prominent platform payout models: 1) fixed creator funds; & 2) direct revenue share arrangements.

Fixed Creator Funds – A fixed dollar amount fund by which creators are paid out based on different metrics (view counts, subscribers, streams, etc.). Since these funds are a fixed dollar amount, new creators joining the platform dilutes the average payout of existing creators. Fixed creator funds have represented a relatively low percentage of overall creator earnings and have received some pushback from creators as being inadequate – according to a Mavrck study (link), only ~27% of creators receive any income from creator funds, of which the majority

have earned <\$1k. As a result, we expect increasing pressure for platforms that have implemented fixed creator funds to shift to direct revenue share arrangements in order to compete for talent. Prominent examples include TikTok's and Meta's respective \$1bn+ Creator Funds.



Source: Mavrck, eMarketer, Data compiled by Goldman Sachs Global Investment Research

Direct Revenue Share – Creators are paid a % of revenues (typically advertising revenue) generated by the platform on their content. This payout model was pioneered by YouTube in the early 2010s through their Partner Program (~55% of revenue paid to creators on long-form video) and has since been expanded to include YouTube Shorts (with a ~45% revenue share). While a direct revenue share model is typically more expensive for platforms vs. a fixed creator fund (payouts scale with revenues; theoretically no cap on payouts), this model often acts as a differentiator for platforms and improves creator acquisition & retention – in our view, YouTube has been able to differentiate itself as being "creator-friendly" through its early adoption of high percentage payout models. Other examples include TikTok's Pulse program, Spotify and Twitch.

We see the rise of **short-form video**, which continues to take share of digital engagement and ad spend (as platforms ramp monetization of their respective products), as the primary growth driver for ad-supported platform payouts to creators over the next 5+ years. We expect three short-form video products to continue to build scale for their respective platforms and drive the majority of growth within this creator payout model going forward - **TikTok (Bytedance)**; **Reels (META)** and **YouTube Shorts (GOOGL)** - which we discuss in more detail in the section below.

In addition, we would highlight that heightened competition for creators during the pandemic period increased pressure for platforms to implement more creator-friendly payout models (e.g. YouTube's Partner Program for Shorts) to attract creators. Going forward, our expectation for less competition amongst platforms and a "flight to quality" (i.e. creators aggregating around the few largest, most established platforms) may alleviate some of this pressure and drive upside to margins (in the form of lower costs/incentives) for incumbent platforms as monetization scales.

Brand-Direct Deals (Influencer/Affiliate Marketing):

While sources of income varies by creator ("status"/audience base, level of income, professional partnerships, etc.), to date brand-direct deals represent the largest source of income for creators. According to NeoReach, 69% of creators cite "brand deals" as their highest earning revenue source (vs. the next highest source, "ad share revenue," at only 7%). As a result, many platforms have developed creator marketplaces whereby a platform leverages its base of (& knowledge about) creators, users and advertisers to facilitate creators and brands connecting directly on platform for the purpose of influencer/brand marketing. While we could see this shift in the coming years as platforms implement new direct revenue share models (especially within short-form video, e.g. YouTube Shorts' Partner Program), we expect brand-direct deals to comprise the majority of creator income for the foreseeable future.

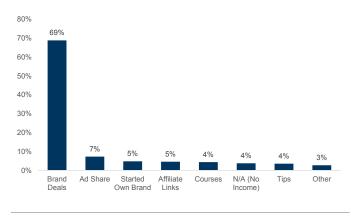


Exhibit 13: Survey question "What is the highest earning revenue source for you as a creator?"

Source: NeoReach, Influencer Marketing Hub, Data compiled by Goldman Sachs Global Investment Research

Below we analyze two of the most common types of brand/creator spend: influencer marketing & affiliate marketing.

Influencer Marketing - used to promote brand awareness with a focus on content creation. Brands rely on a creator's consistent engagement and trusted reputation to advertise a product (often leveraging the fact that the creator has built an audience within a specific niche and therefore represents a trusted voice/reputation within a given category). Brands typically compensate creators via flat rate fees, commissions and/or product gifting. We'd note this differs from brands simply advertising against certain content (e.g. contextual advertising) but rather represents a direct partnership between the brand and creator – as such (and since creator marketplaces are typically free offerings) a platform typically captures little-to-no revenues from true influencer marketing spend. To help navigate the somewhat opaque market, some of the largest creators hire managers to help negotiate brand deals (including price discovery, KPIs & rate cards, vetting potential partnerships, etc.) in exchange for a percentage of a creator's earnings (usually between ~10-20%, according to Chelle Law).

According to eMarketer, US influencer marketing spend (as defined by cash payments made directly to creators) was ~\$5.0bn in 2022 (up from ~\$2.4bn in 2019)

and is expected to grow at a \sim 24% '19-'24 CAGR to reach \sim \$7.1bn by 2024, with Instagram holding the largest share by a significant margin (at \sim 45% of spend in 2022).

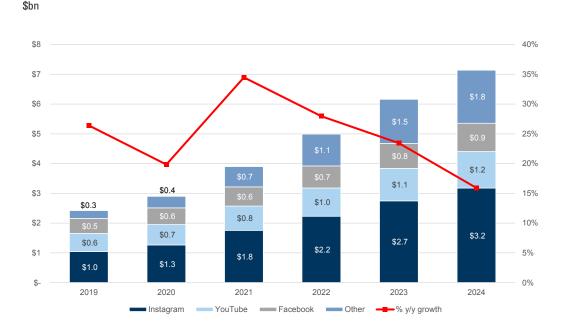


Exhibit 14: US Influencer Marketing Spend, by Platform

Source: eMarketer, Data compiled by Goldman Sachs Global Investment Research

Affiliate Marketing – personalized links and/or discount codes given to creators by brands with the objective to drive direct traffic/sales. Creators are often paid a percentage of sales generated for a brand/product, which varies by platform or product. According to data from Influencer Marketing Hub (link), over 80% of brands have some kind of affiliate program and over 80% of advertisers allocate at least 10% of their total marketing budget to affiliate programs. The blurring of lines between traditional eCommerce and advertising platforms and the rise of social commerce, which has been an emerging theme over the past several years, has aided in the growth of affiliate marketing spend, particularly on non-traditional eCommerce platforms (for example, as users become more accustomed to using social media platforms for product discovery and direct checkout).

While commission rates can vary widely by platform/seller, for context we provide a detailed breakdown of standard commission rates for two large affiliate marketing programs: Amazon's Associates Program and eBay's Partner Network.

Exhibit 15: Amazon's Standard Commission Rates by Product Category

Commission Rates for Specific Product Categories	
Amazon Games	20%
Luxury Beauty, Luxury Stores Beauty, Amazon Explore	10%
Digital Music, Physical Music, Handmade, Digital Videos	5%
Physical Books, Kitchen, Automotive	5%
Amazon Fire Tablet / Fire TVs / Kindle / Echo / Cloud Cam / Ring Devices, Amazon Fashion Women's, Men's & Kids Private Label, Luxury Stores Fashion, Apparel, Watches, Jewelry, Luggage, Shoes, and Handbags & Accessories	4%
Toys, Furniture, Home, Home Improvement, Lawn & Garden, Pets Products, Headphones, Beauty, Musical Instruments, Business & Industrial Supplies, Outdoors, Tools, Sports, Baby Products, Amazon Coins	3%
PC, PC Components, DVD & Blu-Ray	3%
Televisions, Digital Video Games	2%
Amazon Fresh, Physical Video Games & Video Game Consoles, Grocery, Health & Personal Care	1%
Gift Cards; Wireless Service Plans; Alcoholic Beverages; Digital Kindle Products purchased as a subscription; Food prepared and delivered from a restaurant; Amazon Appstore, Prime Now, or Amazon Pay Places	0%
All Other Categories	4%

Exhibit 16: eBay's Standard Commission Rates by Product Category

Cotogon	Sub Catagony	% of Sale	Сар
Category Business &	Sub-Category	% of Sale	 лар
Industrial	Business & Industrial	2.5%	\$ 225
Collectibles	Art & Antiques; Coins & Paper Money; Crafts; Dolls & Bears; Entertainment Memorabilia; Miscellaneous Collectibles; Pottery & Glass; Sports & Leisure; Stamps, Toys, Hobbies, and Games	3.0%	\$ 550
Electronics	Cameras & Photo; Cell Phones & Accessories; TV, Video & Audio; Video Games & Consoles	2.0%	\$ 550
	Computers, Tablets & Networking	1.5%	\$ 550
Fashion	Jewelry & Watches	4.0%	\$ 550
Home & Garden	Alcohol & Food, Appliances, Baby, Miscellaneous Home & Garden, Pet Supplies	3.0%	\$ 550
Lifestyle	Gift Cards & Coupons, Miscellaneous Lifestyle, Musical Instruments, Sports, Tickets & Events	3.0%	\$ 550
Media	Music	3.0%	\$ 550
Parts &	eBay Motors	4.0%	\$ 100
Accessories	Vehicle Parts & Accessories	3.0%	\$ 550
Real Estate	Real Estate	1.0%	\$ 100
All Other	All Other	4.0%	\$ 550

Source: Company data, Data compiled by Goldman Sachs Global Investment Research

Source: Company data, Data compiled by Goldman Sachs Global Investment Research

Audience-Based Monetization:

Represents features for creators to monetize directly from their audience base. With the exception of the subscription/direct take-rate model, platforms often do not generate revenue from many of these features (e.g. tipping, virtual gifting, etc.) but rather offer them as ways to increase creator acquisition and retention.

- Subscription / Direct Take Rate Models Users pay creators directly for content, either via a recurring subscription fee or for a one-time transaction, with platforms taking a varying % take rate on subscription payments (anywhere from ~5-50%). Subscription models have become a more popular way for creators to maintain a steady revenue stream (vs. fixed creator funds, which can become diluted and revenue sharing, which is more dependent on outside factors incl. macro, the platform's ability to monetize content, etc.). Examples include Patreon, OnlyFans & Cameo.
- Tipping Direct cash payments from users to creators. While not common, certain platforms that offer tipping features take a percentage cut of the tip amount. Examples include YouTube's Super Thanks, of which creators receive ~70% (after deductions for tax & app store fees), and Twitter's Tip Jar, which allows creators to add a "Tips" icon to their profile and receive direct payments.
- Virtual Gifts/Coins Similar to tipping, users convert fiat currency into in-app virtual currency ("virtual coins"), which can be used to purchase virtual gifts for creators. Examples include YouTube's Super Chats & Super Stickers, Twitch's Bits (of which creators receive \$0.01 for every 1 bit used to "cheer" on their channel), and Facebook's Stars (of which creators receive \$0.01 for every 1 star used while on a live stream).

Assessing The Current Landscape - Key Platforms & Engagement Trends

In recent years, the emergence of the creator economy and increase in funding to support this growth has given rise to a number of new emerging platforms centered around this theme. At the same time, traditional platforms have responded by redesigning core use cases to prioritize individual creators (e.g. Meta's launch of Reels and shifting from social graph-based to interest/discovery graph-based content recommendations). Below we outline some of the most prominent creator-focused platforms including their primary creator products/services, monetization offerings and payout structure.

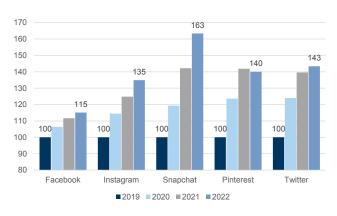
Exhibit 17: Creator Economy Landscape

aming iption	F	OnlyFans	 Subscription offering (content behind paywall) Creator Analytics Data 	Tips Personalized content	Some content behind a paywall with a ~20% platform fee (mostly in the form of subscription, but also as a-la-carte offerings)
Digital / Streaming Media (Subscription)		Patreon	Subscription offering (content behind paywall)	Membership Benefits (i.e., Creator Coins) Additional Tools (i.e., Patreon Lens, Polls/Voting, ect.)	All content behind a paywall with a ~5-12% platform fee
Digita Media	=	Spotify	• Ad Revenue Share	Tools to easily create podcasts on platform	Undisclosed amount through advertising related monetization (as well as podcast subscriptions)
deo	J	TikTok	Creator Fund (fixed payout) TikTok Pulse (adrevenue share) Tips Creator Marketplace Virtual Gifts/Virtual Coins	Creator Analytics Data Promote (i.e., Boost) Post Testing horizontal screen mode Testing Creator Fund 2.0 and Paywaled content Branded Mission (Creative agency)	Will grow to a + \$1bn creator fund over 3 years (available for creators with +10k followers and +100k video views in the last 30 days), payouts distributed based on a variety of factors (i.e., view count, likes, comments, engagement, etc.)
Digital Video	Ψ	Twitch	Partner Program (ad revenue share) Subscription offering (content behind paywall) Virtual Goods (i.e., Bits) Affiliate & Partner Program	 ~5% revenue share for merchandise (Available for Partners) Additional tools (i.e., Transcoding, Subscriber Streams, etc.) Creator Dashboard & Analytics 	55% of ad revenue (effective June 1, 2023 payments will jump to 70% of ad revenue for the first \$100k, after which reduces to 50% • "50% of subscription revenue for a "vast majority" of streamers
Ō		YouTube	Ad Revenue Share YouTube Brand Connect Virtual Goods (i.e., Super Chat & Super Stickers)	Tipping (i.e., Super Thanks) Live Shopping	 45% of ad revenues from Shorts (available for creators with +14 in subscribers and +10m views in a 90darperiodstarting in 2023 replacing the original YouTube Shorts Fund) Payout distributed on a monthly based on share of total Shorts views
ctive nt		Epic Games (Fortnite / Unreal Engine)	Fortnite: • Enables creators to develop games/experiences within Fortnite and in-game monetization tools (marketplace for items, skins, etc.)	Unreal Engine: • 3D digital asset creation tool for developers & creators across a variety of use cases (gaming, digital media, etc.) • Number of creation tools including MetaHuman, Twinmotion, etc.	 Fortnite: Distributes 40% of revenue (in-game monetization) to eligible creators that publish games within Fortnite Unreal Engine: Access to game engine through licensing (per- seat subscription fee or custom licensing depending on size of developer)
Gaming / Interactive Entertainment		Rec Room	 Virtual Goods Marketplace Paid Access (charging for one-time experiences) 	Developer Products (Charging for item/ability)	 Offers ability for game developers to purchase "Inventions" (digital assets/goods to use in game creation) and in-game monetization (82C) within "Rooms" Rec Room takes a "30% platform fee on all sales of inventions & in-game purchases
Gamin Ente		Roblox	Virtual Goods Marketplace Paid Access (charging for one-time experiences) Game Passes (charging for special privileges) Developer Products (Charging for item/ability)	Private Servers (subscription-based) Catalog Fees & Commission Premium Payouts & Plugins	Payout to creator depends on what is being sold, but is generally around 30% (creators of a virtual item gets 30% and sellers of virtual item get 40%)
lace		Cameo	Marketplace for digital 1x1 content	 Additional products beyond video (i.e., Cameo Calls, Cameo Live, Merch, etc.) 	All content behind a paywall with a ~25% platform fee (plus the 30% app store fees if booked on the mobile app)
Marketplace	•	Domestika	 Marketplace for online courses for created to help with brand building, content created to help with brand building. 	tors from a network of professional creators tion, distribution etc.	Courses available for purchase "a la carte" (with Domestika taking an undisclosed take rate on all purchases)
Mai	•••	Whatnot	 Online 3P marketplace for buying/sellir rare goods 	ng collectibles, digital assets (NFTs) & other	Whatnot takes a *8% take rate on all items sold and 2.9% + 30 cents per transaction for payment processing
	-	Clubhouse	 Tipping/direct payments ("send money") Sponsored Rooms (influencer marketing) 	 Creator First program (offers tools/services to creators incl. equipment, consulting, financial support, etc.) 	100% of user "tips" go directly to creators (minus payment processing fees)
		Discord	 Subscription offering (membership to private servers) 	Creator Portal Promo Pages	Monthly membership plans - "server subscriptions" ranging from \$2.99-\$199.99/month. Creators keep 90% of subscription revenue.
ocial Media	<mark>f</mark> 0	Instagram / Facebook	Creator Fund (fixed payout) Virtual Gifts (i.e., badges) Subscriptions Creator Marketplace	Creator Analytics Data Boost Posts Interoperable Subscriptions NFT initiatives	S1bn creator fund (across Facebook and Instagram and available on an invite only basis) earned through bonuses - payouts distributed ounce the creator earns +\$100 Reels Play Bonus Program (details around monetization remain undisclosed)
Socia	P	Pinterest	Creator Fund (fixed payout) Creator Hub Creator Analytics Data Creator specific tools (i.e., Pin Builder)	Idea Pins (shoppable) Affiliate links/brand partnership tags in Idea Pins Vochi (video creation & editing app)	\$1.2m creator fund (available on selection/invite-only and refreshes every quarter)
	£	Snapchat	Creator Fund (fixed payout) Virtual Gifts (i.e., Snap Stars) Virtual Currency (i.e., Snap Tokens) Creator Marketplace	 Creator Analytics Data Director Mode (video editing) Ghost Lens Creator Program 	 Millions/year creator fund (available to more popular Spotlight creations through notification in the form of "snap Crystal" where 1 crystal = \$0.10) Snapchat Sound) Creator Fund (available to creators who are driving content innovation - up to \$100k ingrants per month) \$120k Black Creator Accelerator Program Spotlight Challenges (awards typically ranging from \$1-25k)
	•	DistroKid	Distributes music for individual creators services (Spotify, Apple Music, etc.)	sto all major online stores & streaming	Fixed annual fee (\$22.99) for unlimited song uploads; creators are paid 100% of streaming loyalty fees
S	impact	Impact	content creation tools, etc.	ors with brands for influencer/affiliate ators including consulting, data & analytics,	Agency relationship whereby Impact earns fees (varying by brand/influencer) on partnership deals and campaigns the company helps facilitate
Tools / Services	*	Jellysmack	 Jellysmack Creator Program - creator tools/services for content creation (editing, etc.) & distribution (Al-driven content distribution optimized across platforms) 	JellyFi (financial solutions) Facilitate Brand Partnerships Media Licensing Program (licensing content for O&O properties/channels)	Revenue share model whereby Jellysmack takes an (undisclosed & varying) % of ad revenue earned by creator on distribution platforms
ols /		Kajabi	 Offers creator tools / services for creator including course content creation, distribution CRM tools 	ors centered around online education, ution & marketing services, payments & other	Subscription fee model (creator pays fixed monthly fee for Kajabi services)
P	*	Linktree	 Develops unique "landing page" for creatifiliate marketing and/or direct commer 	ators across different channels / platforms for ce	Subscription fee model (creator pays fixed monthly fee for Linktree services)
	0	Picsart	Offers a variety of photo/video editing	and design tools for content creation	Freemium subscription fee model (basic tools available for free; premium tools available with upgrade to premium monthly subscription)
	sp*tter	Spotter	 Offers upfront payment for future ad re (YouTube) 	evenue on creator's existing video assets	n/a

Source: Company data, The Information, Pitchbook, Data compiled by Goldman Sachs Global Investment Research

According to data from SensorTower, new creator-focused platforms across various forms of media (streaming audio, digital video subscription services, gaming, etc.) have seen strong user & engagement growth over the past several years, with both average MAUs and total time spent increasing in 2022 over 2019 across all platforms. At the same time, existing scaled platforms have also seen user & engagement growth, which we would partially attribute to these platforms introducing more creator-focused features & products to adopt to shifting consumer consumption habits.

Exhibit 18: Average Indexed MAUs (Global) - Social Media Indexed to 2019 = 100



Reflects monthly MAUs averaged annually and indexed to 2019 = 100

Source: SensorTower, Data compiled by Goldman Sachs Global Investment Research



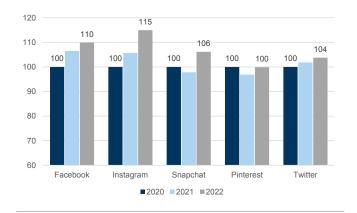
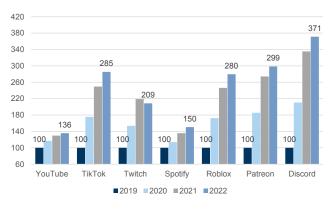


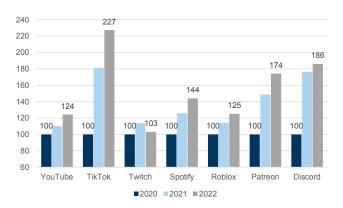
Exhibit 19: Average Indexed MAUs (Global) - Streaming Media, Digital Video & Other Indexed to 2019 = 100



Reflects monthly MAUs averaged annually and indexed to 2019 = 100

Source: SensorTower, Data compiled by Goldman Sachs Global Investment Research

Exhibit 21: Total Indexed Time Spent (Global) - Streaming Media, Digital Video & Other Indexed to 2020 = 100



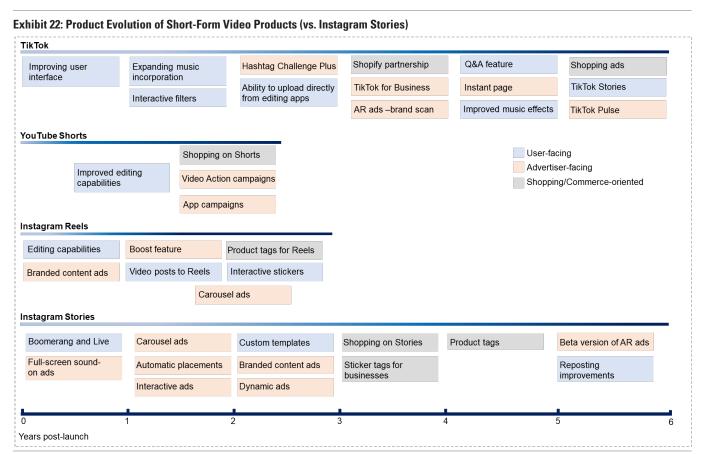
Source: SensorTower, Data compiled by Goldman Sachs Global Investment Research

Source: SensorTower, Data compiled by Goldman Sachs Global Investment Research

Analyzing the Rise of Short-Form Video

Over the past several years, short-form video has emerged and taken significant share of user engagement away from other forms of media (long-form digital video, social media, linear TV, etc.). The short-form video format was pioneered by TikTok, which saw rapid adoption globally during the pandemic, and more recently adopted by legacy platforms (Reels within Facebook & Instagram; Shorts within YouTube; Spotlight within Snapchat; etc.) to capitalize on shifting consumer habits and, increasingly, ad spend. Below we analyze the three most prominent short-form video products: **TikTok**, **Reels** and **YouTube Shorts**. As shown by the data below, short-form video has been a meaningful driver of engagement growth (users, time spent, number of sessions, etc.) for each of the three major platforms in recent years. In addition, we believe the majority of growth in ad-supported creator payouts by platforms over the next several years to come from short-form video and, as both META and GOOGL have leaned into ramping monetization of their respective products in recent months, we see Reels and Shorts as well-positioned to capture an increasing share of spend going forward.

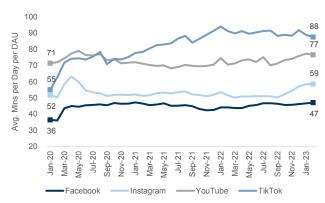
We compare the product evolution of these three short-form video platforms, including drawing comparisons to Instagram's previous shift from Feed to Stories (starting in 2017-18). As shown below, each platform has prioritized user-facing developments early on before leaning into monetization improvements (advertiser-facing and, lastly, shopping/commerce-oriented products). We see the pace of innovation for both Instagram Reels and YouTube Shorts has been faster than the prior evolution of Instagram Stories, which we would attribute to several factors: a) higher degree of competition (around both users/engagement and ad spend) during the short-form video cycle (e.g. TikTok); & b) faster overall user adoption of short-form video vs. Stories (accelerated by the COVID-19 pandemic); & c) higher adoption and familiarity with the short-form video format from advertisers (higher digital penetration of total ad spend esp. digital video, more platforms offering SF video products, etc.). This informs our view that this will be a quicker transition (as defined by monetization headwinds easing & ramping of ad revenues) compared to the previous transition from Feed to Stories.



Source: Company data, Goldman Sachs Global Investment Research

META and GOOGL have partially mitigated the impact of short-form video taking share of total digital media consumption and have seen increasing time spent and usage despite TikTok's significant rise in popularity over the past several years. Specifically, data from SensorTower shows that both average time spent per day and number of total app sessions have increased for each platform since 2020, which we would partially attribute to increasing adoption of each platforms' respective short-form video product. This aligns with META's public disclosures that, to date, Reels has been incremental to overall time spent on the platform.

Exhibit 23: Average Daily Time Spent per DAU (Global) Minutes per day



Source: SensorTower, Data compiled by Goldman Sachs Global Investment Research

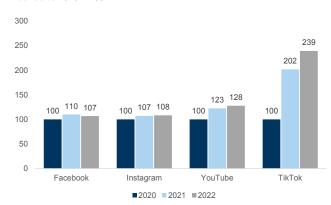
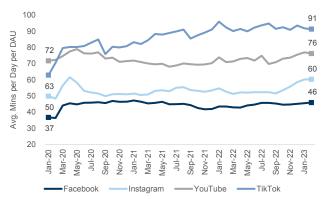


Exhibit 25: Total Indexed Number of Sessions (Global) Indexed to 2020 = 100

Reflects the total number of annual app sessions (number of times a user opens a given app) indexed to $2020 = 100\,$

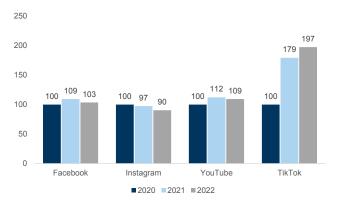
Source: SensorTower, Data compiled by Goldman Sachs Global Investment Research

Exhibit 24: Average Daily Time Spent per DAU (US) Minutes per day



Source: SensorTower, Data compiled by Goldman Sachs Global Investment Research

Exhibit 26: Total Indexed Number of Sessions (US) Indexed to 2020 = 100



Reflects the total number of annual app sessions (number of times a user opens a given app) indexed to $2020 = 100\,$

Source: SensorTower, Data compiled by Goldman Sachs Global Investment Research

Short-Form Video Monetization - Sizing the Revenue Opportunity & Headwind for Instagram Reels and YouTube Shorts

Despite driving benefits in the form of increased engagement, the launch of Reels (Facebook & Instagram) and Shorts (YouTube) has acted as a revenue headwind for both platforms as monetization remains in its early stages and revenue efficiency remains significantly lower vs. traditional ad formats (Feed, Stories, long-form video, etc.). Below we attempt to quantify both the revenue opportunity for each platform as well as the headwind that each platform has faced in recent years from the ramp of their respective

products.

Instagram Reels:

As first outlined in our Q4'22 digital advertising industry preview (link), we estimate Instagram Reels can grow at a ~63% '22-'27E CAGR and scale from ~\$1.8bn in 2022 (or ~4% of total IG ad revenues) to ~\$4.0bn in 2023 (or ~8%) and ~\$20.5bn in 2027 (or ~23%). This compares to the company's disclosure that total Reels revenues (across both Facebook & Instagram) reached a ~\$3bn annualized run rate in Q3'22. We anticipate Reels to take "share" of total Instagram ad revenues primarily away from Instagram Feed ads (GSe from ~65% of IG ad revenues in '22 to ~43% in '27) as all organic in-feed video content is transitioned to Reels, with modest share gains from Instagram Stories (from ~27% in '22 to ~32% in '27).

Exhibit 27: Instagram Ad Revenue Estimates, by Format \$mm

nstagram Breakdown	<u>2019</u>	2020	2	2021	2022	2023E	2024E	<u>2025E</u>	2026E	<u>2027E</u>	'19-22E CAGR	'22-27E CAGR
nstagram Ad Revenues	\$ 20,896	\$ 29,459	\$	42,526	\$ 44,320	\$ 49,895	\$ 59,518	\$ 69,636	\$ 80,287	\$ 90,993	28%	15%
% y/y	n/a	41%		44%	4%	13%	19%	17%	15%	13%		
% of Total Advertising	30%	35%		37%	39%	42%	44%	47%	49%	52%		
IG Feed	\$ 15,672	\$ 21,505	\$	29,768	\$ 28,808	\$ 29,937	\$ 33,033	\$ 35,793	\$ 37,976	\$ 39,218	22%	6%
% y/y	n/a	37%		38%	-3%	4%	10%	8%	6%	3%		
% of Total IG	75%	73%		70%	65%	60%	56%	51%	47%	43%		
% of Total Advertising	23%	26%		26%	25%	25%	25%	24%	23%	22%		
IG Stories	\$ 4,179	\$ 6,628	\$	10,631	\$ 11,966	\$ 14,095	\$ 17,409	\$ 21,065	\$ 25,090	\$ 29,345	42%	20%
% y/y	n/a	59%		60%	13%	18%	24%	21%	19%	17%		
% of Total IG	20%	23%		25%	27%	28%	29%	30%	31%	32%		
% of Total Advertising	6%	8%		9%	11%	12%	13%	14%	15%	17%		
IG Reels	\$ -	\$ -	\$	•	\$ 1,773	\$ 3,992	\$ 7,142	\$ 10,794	\$ 15,255	\$ 20,474	n/a	63%
% y/y	n/a	n/a		n/a	n/a	125%	79%	51%	41%	34%		
% of Total IG	0%	0%		0%	4%	8%	12%	16%	19%	23%		
% of Total Advertising	0%	0%		0%	2%	3%	5%	7%	9%	12%		
IG Other (Explore, etc.)	\$ 1,045	\$ 1,326	\$	2,126	\$ 1,773	\$ 1,871	\$ 1,934	\$ 1,985	\$ 1,967	\$ 1,956	19%	2%
% y/y	n/a	27%		60%	-17%	6%	3%	3%	-1%	-1%		
% of Total IG	5%	5%		5%	4%	4%	3%	3%	2%	2%		
% of Total Advertising	2%	2%		2%	2%	2%	1%	1%	1%	1%		

Source: Company data, Goldman Sachs Global Investment Research

To attempt to quantify the Reels headwind to META's total revenues, we provide a scenario analysis below using estimated monetization rates (Reels vs. non-Reels) & implied accretion to time spent. Leveraging data from SensorTower on total time spent on Instagram and assuming that 25% of time spent was on Reels (compared to management's disclosure that Reels was ~20% of time spent in Q2'22 and growing in 2H22), we estimate a 2022 monetization rate (ad revenue per hour) of ~\$0.14 for total Instagram, ~\$0.02 on Reels and ~\$0.18 for non-Reels (based on our ad revenue by format estimates above). We then factor in the accretion impact on total time spent from Reels of between ~5-15% (supported by management's commentary that Reels is incremental to time spent) and apply the non-Reels monetization rate of \$0.18 per hour. The analysis results in an **estimated Reels headwind of ~300-800bps to META's total** Reels represented a ~\$500mm quarterly revenue headwind as of Q3'22 and that management expects Reels to be "revenue-neutral" (i.e. monetization and time spent growth outweighing impact of lower monetization rate) by year-end 2023 or early 2024.

Exhibit 28: Implied META Revenue Headwind from Reels

2022, mm except per-hour rate

Accretion in Time Spent from Reels	15.0%	12.5%	10.0%	7.5%	5.0%
Total IG Hours	315,128	315,128	315,128	315,128	315,128
# of incremental hours from Reels	47,269	39,391	31,513	23,635	15,756
Implied IG Hours ex-Reels	267,859	275,737	283,616	291,494	299,372
Ex-Reels Monetization Rate (per Hour)	\$ 0.18	\$ 0.18	\$ 0.18	\$ 0.18	\$ 0.18
Implied IG Ad Revenue ex-Reels	\$ 48,220	\$ 49,638	\$ 51,057	\$ 52,475	\$ 53,893
GSe IG Ad Revenues	\$ 44,320	\$ 44,320	\$ 44,320	\$ 44,320	\$ 44,320
\$ headwind from Reels	\$ (3,900)	\$ (5,318)	\$ (6,737)	\$ (8,155)	\$ (9,573)
% headwind (to IG Revenues)	-8.1%	-10.7%	-13.2%	-15.5%	-17.8%
Total META Ad Revenues	\$ 113,641	\$ 113,641	\$ 113,641	\$ 113,641	\$ 113,641
% headwind (to META Ad Revenues)	-3.3%	-4.5%	-5.6%	-6.7%	-7.8%

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

YouTube Shorts:

With this report (& alongside our above work on Reels), we also introduce detailed estimates for YouTube advertising revenue. Specifically, utilizing data on time spent, engagement and revenues (based on YouTube's public disclosures and data from comScore), we estimate YouTube Shorts will generate ~\$750mm of revenues in 2023 (or ~2.5% of total YouTube Ads revenues) and grow at a ~98% '23-'27E CAGR to reach \$11.6bn in 2027 (or ~26% of total). We arrive at an estimate for total time spent on YouTube from 2020-2022 by utilizing data from comScore and backing out time spent on Shorts based on Alphabet's public disclosure on daily Shorts views (~3.5bn in Q4'20, ~6.5bn in Q1'21, ~30bn in Q4'21 & ~50bn in Q4'22) and assuming a standard ~15 seconds per Shorts view, with the remaining time spent attributed to long-form video. We then calculate a monetization rate per hour based on time spent and reported revenues (with 100% of YouTube Ads revenue attributed to long-form video in 2020-2022 as Shorts has just recently starting ramping monetization). Based on this analysis (and assuming time spent on Shorts to-date would have monetized at ~100% of the long-form video monetization rate), we estimate YouTube Shorts has acted as a ~400-800bps headwind to total YouTbe Ads revenues since 2021.

Exhibit 29: YouTube Ad Revenue & Time Spent Estimates, by Format

mm, except per-hour figures

YouTube Breakdown	<u>2020</u>	<u>2021</u>	<u>2022</u>	<u>2023E</u>	<u>2024E</u>	<u>2025E</u>	<u>2026E</u>	<u>2027E</u>	'23-27E CAGR
Time Spent (Hours) - Total	748,222	771,419	816,309	881,018	978,080	1,091,320	1,176,249	1,239,947	9%
% y/y growth	n/a	3%	6%	8%	11%	12%	8%	5%	5
Time Spent (Hours) - Shorts	1,342	27,869	64,708	129,417	226,479	339,719	424,648	488,346	39%
% of total	0%	4%	8%	15%	23%	31%	36%	39%	5
% y/y growth	n/a	1977%	132%	100%	75%	50%	25%	15%	5
Time Spent (Hours) - Long-Form Video	746,881	743,550	751,601	751,601	751,601	751,601	751,601	751,601	0%
% of total	100%	96%	92%	85%	77%	69%	64%	61%	5
% y/y growth	n/a	0%	1%	0%	0%	0%	0%	0%	5
Revenue per Hour - Total	\$ 0.03	\$ 0.04	\$ 0.04	\$ 0.03	\$ 0.03	\$ 0.03	\$ 0.03 \$	0.04	1%
% y/y growth	n/a	42%	-4%	-5%	0%	-1%	2%	4%	,
Revenue per Hour - Shorts	\$ -	\$ -	\$ -	\$ 0.01	\$ 0.01	\$ 0.01	\$ 0.02 \$	0.02	42%
% of long-form	n/a	n/a	n/a	15%	25%	35%	45%	55%	5
% of total	n/a	n/a	n/a	17%	30%	44%	56%	67%	, ,
% y/y growth	n/a	n/a	n/a	n/a	76%	43%	31%	24%	,
Revenue per Hour - Long-Form Video	\$ 0.03	\$ 0.04	\$ 0.04	\$ 0.04	\$ 0.04	\$ 0.04	\$ 0.04 \$	0.04	3%
% y/y growth	n/a	47%	0%	0%	6%	2%	2%	2%	5
Implied Revenues - Total	\$ 19,772	\$ 28,845	\$ 29,243	\$ 29,912	\$ 33,178	\$ 36,496	\$ 40,145 \$	44,160	10%
% y/y growth	n/a	46%	1%	2%	11%	10%	10%	10%	5
Implied Revenues - Shorts	\$ -	\$ -	\$ -	\$ 753	\$ 2,324	\$ 4,985	\$ 8,138 \$	11,626	98%
% of total	0%	0%	0%	2.5%	7.0%	13.7%	20.3%	26.3%	5
% y/y growth	n/a	n/a	n/a	n/a	209%	114%	63%	43%	5
Implied Revenues - Long-Form Video	\$ 19,772	\$ 28,845	\$ 29,243	\$ 29,159	\$ 30,854	\$ 31,511	\$ 32,007 \$	32,534	3%
% of total	100%	100%	100%	97%	93%	86%	80%	74%	5
% y/y growth	n/a	46%	1%	0%	6%	2%	2%	2%	, ,

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

Valuation Methodology & Key Risks

Alphabet (GOOGL, Buy, \$128 PT) - Our 12-month price target is based on an equal blend of (1) EV/GAAP EBITDA applied to our 2024 estimates and (2) a modified DCF using EV/FCF-SBC multiple applied to our 2027 estimates discounted back 3 years. Risks to our Buy rating include: a) competition of product utility levels and advertising dollars; b) headwinds to monetizable (product) search from industry disruption; c) shifting media consumption habits; d) heavy investments depress operating margins for longer than our forecasts; e) no/low levels of incremental shareholder returns going forward; & f) 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 and investor risk appetite for growth stocks.

Meta Platforms (META, Buy, \$215 PT) - Our 12-month price target is based on an equal blend of (1) EV/GAAP EBITDA applied to our 2024 estimates and (2) a modified DCF using EV/FCF-SBC multiple applied to our 2027 estimates discounted back 3 years. **Risks to our Buy rating include:** a) competition for user growth, user engagement & advertising dollars across an array of incumbent and emerging Internet, media and commerce companies; b) large investments in long-tailed initiatives depress operating margins for longer than our forecasts; c) no/low levels of incremental shareholder returns going forward; d) regulatory scrutiny and industry practices altering the business model's prospects; e) potential antitrust scrutiny could prove to be a headwind to M&A aspiration (to add talent and product innovation inorganically) and/or result in a break-up or dis-synergies of prior period M&A activity; & f) inability to monetize upside optionality opportunities (messaging layer, social commerce/shopping, Oculus/Metaverse). In addition, Meta is exposed to the volatility caused by the global macroeconomic environment and investor risk appetite for growth stocks.

Amazon (AMZN, Buy, \$145 PT) - Our 12-month price target is based on: (1) An equal blend of EV/GAAP EBITDA applied to our 2024 estimates and a modified DCF using an EV/(FCF-SBC) multiple applied to our 2027 estimates discounted back 3 years; (2) SOTP of EV/Sales applied to our 2024 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, all based on 2024 estimates. **Risks to our Buy rating include:** a) any impact to eCommerce or Cloud growth from competition; b) lack of success in scaling high margin businesses including Advertising, Cloud, third-party selling and the subscription business; c) investments across any array of initiatives creating a headwind to gross or operating margin; & d) any product or platform changes necessary to comply with changes to the global regulatory environment. In addition, Amazon is exposed to the volatility caused by the global macroeconomic environment and investor risk appetite for growth stocks.

Spotify (SPOT, Neutral, \$111 PT)- Our 12-month price target is based on an equal blend of: (1) EV/Gross Profit applied to our 2024 estimates and; (2) a modified DCF using EV/GAAP EBITDA multiple applied to our 2027 estimates discounted back 3 years. **Risks to our Neutral rating include:** a) a shift in the current competitive environment

(impacts to users, pricing, content costs) that would impact our current estimates; b) the evolution of the podcasting product and its impact on gross/operating margins; c) emerging market growth; d) changes in consumer habits with respect to audio entertainment; & e) the impact of pricing increases on the user base and financial model.

Roblox (RBLX, Sell, \$21) - Our 12-month price target is based on an equal-blend of: (1) EV/Bookings applied to our 2024 estimates and; (2) a modified DCF using an EV/FCF-SBC multiple applied to our 2027 estimates discounted back 3 years. **Risks to our Sell rating include:** higher than expected engagement and monetization on the platform; potentially higher ARPDAU as a result of Roblox paying out more to developers and attracting developers at a higher clip with more of them focusing on older demographic; & greater than expected operating leverage on R&D and spend on trust and safety driving higher EBITDA margins. Roblox remains exposed to the volatility caused by the global macroeconomic environment & investor risk appetite for growth stocks.

Disclosure Appendix

Reg AC

We, Eric Sheridan, Alex Vegliante, CFA, Alexandra Steiger, Lane Czura and Sanchit Chandna, 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.

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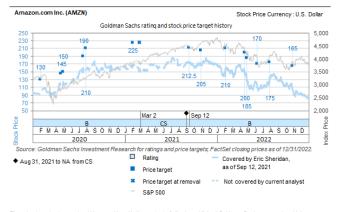
Distribution of ratings/investment banking relationships

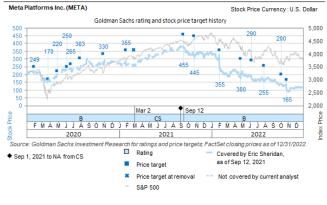
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	F	Rating Distribution	n	Investme	ent Banking Relat	tionships
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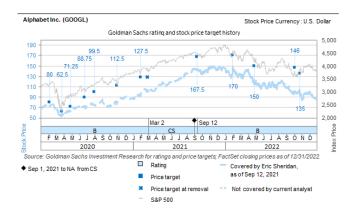
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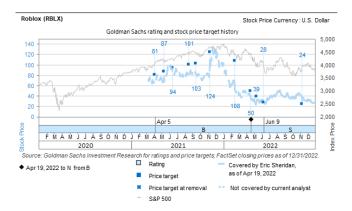




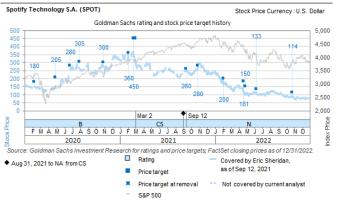
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