

DoubleVerify Holdings, Inc.

What do you get when you cross a rating agency with an AdTech firm? Initiate Buy

Initiating Coverage: BUY | PO: 47.00 USD | Price: 35.76 USD

An emerging media quality standard for digital marketing

Think of DoubleVerify (DV) as the Moody's of digital advertising. In the same way ratings agencies grade corporate debt, DV analyzes the quality of online media -- measuring the rate of unviewable, fraudulent, and brand-objectionable content bought during a digital campaign, thereby helping brands understand the true effectiveness of their ad budgets, and by extension, the reliability of their numerous intermediaries. We think that all stakeholders are motivated to adopt a standard for media quality, eventually integrating it into all areas of practice, helping to preserve the fair exchange of value across the value chain. Thus, we initiate DV at Buy with a PO of \$47, implying 32% upside.

Long runway for 20%+ growth due to ramping adoption

Advertisers using at least one of DV's solutions likely deployed ~\$30bn of ad budgets in 2022, or about 10% of combined global Social, Display, Video and CTV spend. Even powerful walled gardens such as META, GOOGL, NFLX, TikTok & LinkedIn have acquiesced to advertiser demands for independent verification, presenting DV an opportunity to ride the coattails of digital media innovation for years to come. DV's lucrative campaign performance improvement solutions are a natural add-on to its measurement business, positioning it as an entrenched data provider to all of the industry's largest DSPs including AMZN, GOOGL, TTD, Yahoo, ADBE, and MSFT's Xandr.

DV likely to emerge as leader in a duopoly market

We think the market will coalesce around one, or perhaps two vendors, similar to how Moody's and S&P dominate the bond ratings market. Advertisers need only one or two trusted, comprehensive methodologies that are easy to learn and apply. DV offers the most comprehensive portfolio and its metrics de-duplicate numerous point solutions offered by other vendors. We see Integral Ad Sciences ("IAS") emerging as #2.

Valuation: 37x EV/CY24 EBITDA for a rule-of-55 stock

Our PO \$47 is based on 37x EV/CY24 EBITDA. We think TTD (not covered) is the best direct comp at 38x which is viewed as the leader within its part of the ecosystem: open web DSPs. Another approach suggests DV should trade at ~14x premium to a basket of 13 information services stocks (23x CY24), such as MCO, because the growth rate of its end market (low teens) far exceeds that of info services, due to its tech-driven nature.

Estimates (Dec) (US\$)	2021A	2022A	2023E	2024E	2025E
EPS	0.51	0.54	0.71	0.88	1.16
GAAP EPS	0.18	0.25	0.36	0.42	0.63
EPS Change (YoY)	54.5%	5.9%	31.5%	23.9%	31.8%
Consensus EPS (Bloomberg)			0.51	0.66	0.83
DPS	0	0	0	0	0
Valuation (Dec)					
P/E	70.1x	66.2x	50.4x	40.6x	30.8x
GAAP P/E	198.7x	143.0x	99.3x	85.1x	56.8x
EV / EBITDA*	53.6x	41.6x	32.5x	26.6x	20.6x
Free Cash Flow Yield*	1.2%	0.9%	1.3%	2.2%	2.9%

* For full definitions of *IQmethod*SM measures, see page 24.

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Stock Data

Price	35.76 USD
Price Objective	47.00 USD
Date Established	11-Jan-2024
Investment Opinion	C-1-9
52-Week Range	22.75 USD - 42.51 USD
Mkt Val (mn) / Shares Out (mn)	6,079 USD / 170.0
Free Float	81.0%
Average Daily Value (mn)	49.34 USD
BofA Ticker / Exchange	DV / NYS
Bloomberg / Reuters	DV US / DV.N
ROE (2023E)	12.8%
Net Dbt to Eqty (Dec-2022A)	-30.5%
ESGMeter™	Medium

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

DSP: Demand Side Platform

CTV: Connected TV

CAGR: Compound Annual Growth Rate

TAM: Total Addressable Market

CPM: Cost per Mile

ASP: Average Selling Price

MCO: Moody's Corp

TTD: The Trade Desk

iQprofileSM DoubleVerify Holdings, Inc.

iQmethodSM – Bus Performance*

(US\$ Millions)	2021A	2022A	2023E	2024E	2025E
Return on Capital Employed	10.9%	8.7%	9.7%	11.0%	12.9%
Return on Equity	13.5%	10.9%	12.8%	13.6%	15.5%
Operating Margin	23.9%	23.7%	24.6%	24.9%	27.3%
Free Cash Flow	73	55	79	132	174

iQmethodSM – Quality of Earnings*

(US\$ Millions)	2021A	2022A	2023E	2024E	2025E
Cash Realization Ratio	1.0x	1.0x	0.8x	1.0x	1.0x
Asset Replacement Ratio	0.3x	1.2x	0.4x	0.7x	0.8x
Tax Rate	NM	27.1%	27.6%	25.0%	25.0%
Net Debt-to-Equity Ratio	-27.7%	-30.5%	-26.8%	-34.0%	-41.1%
Interest Cover	NM	NM	NM	NA	NA

Income Statement Data (Dec)

(US\$ Millions)	2021A	2022A	2023E	2024E	2025E
Sales	333	452	572	717	881
% Change	36.4%	36.0%	26.5%	25.2%	23.0%
Gross Profit	278	375	463	576	705
% Change	33.7%	34.6%	23.6%	24.4%	22.4%
EBITDA	110	142	181	221	285
% Change	50.0%	29.0%	27.8%	22.4%	28.8%
Net Interest & Other Income	(1)	0	6	0	0
Net Income (Adjusted)	82	92	123	154	204
% Change	72.2%	11.5%	35.0%	24.4%	32.7%

Free Cash Flow Data (Dec)

(US\$ Millions)	2021A	2022A	2023E	2024E	2025E
Net Income from Cont Operations (GAAP)	29	43	62	74	110
Depreciation & Amortization	30	34	40	43	45
Change in Working Capital	(13)	(21)	(60)	(47)	(51)
Deferred Taxation Charge	(8)	(20)	(20)	0	0
Other Adjustments, Net	44	58	75	90	105
Capital Expenditure	(9)	(40)	(17)	(29)	(35)
Free Cash Flow	73	55	79	132	174
% Change	539.8%	-25.2%	43.6%	67.0%	31.9%
Share / Issue Repurchase	NA	NA	NA	NA	NA
Cost of Dividends Paid	0	0	0	0	0
Change in Debt	(22)	0	0	0	0

Balance Sheet Data (Dec)

(US\$ Millions)	2021A	2022A	2023E	2024E	2025E
Cash & Equivalents	222	268	282	412	583
Trade Receivables	123	167	215	271	335
Other Current Assets	23	10	24	30	34
Property, Plant & Equipment	18	47	58	71	88
Other Non-Current Assets	507	545	641	607	575
Total Assets	892	1,037	1,220	1,391	1,615
Short-Term Debt	0	0	0	0	0
Other Current Liabilities	57	69	78	93	110
Long-Term Debt	0	0	0	0	0
Other Non-Current Liabilities	36	91	89	87	85
Total Liabilities	93	160	167	180	195
Total Equity	799	877	1,053	1,211	1,420
Total Equity & Liabilities	892	1,037	1,220	1,391	1,615

* For full definitions of iQmethodSM measures, see page 24.

Company Sector

PC Software

Company Description

DV is a software platform for digital media measurement. Through its metrics, it helps preserve the fair value exchange between buyers & sellers of digital media. Its proprietary DV Authentic Ad metric measures whether a digital ad is displayed in a fraud-free, brand-suitable environment & is fully viewable in the intended geography. DV measures quality on all major platforms (e.g. Meta, Google, TikTok, open web etc.). DV also prevents DSPs from bidding on poor quality media in the first place.

Investment Rationale

DV is the emerging leader in a the digital ad verification market, which we expect to become a duopoly at maturity. It measured 5.5 trillion impressions in 2022, across platforms and devices, which is orders of magnitude greater than any individual platform. DV's scale gives it an advantage in developing new products, which it sells at premium prices, that help improve advertising performance. DV's fixed fee-per-impression pricing strategy dampens the impact of economic downturns.

Stock Data

Average Daily Volume 1379,649

Quarterly Earnings Estimates

	2022	2023
Q1	0.10A	0.14A
Q2	0.13A	0.17A
Q3	0.13A	0.17E
Q4	0.17A	0.23E

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Executive summary

Digital ads: one can't manage what one can't measure

One may be surprised to learn that most digital marketers know little about whether their advertisements appear next to suitable content, whether they are viewable on a webpage, or even whether they were viewed by a real consumer. The inability to measure the quality of ad impressions bought on the internet distorts campaign KPIs (click-through rate, impressions delivered, etc.), thereby preventing the marketers from optimizing their campaigns for maximum ROI. Each year, tens of billions of advertising dollars are wasted on poor quality or fraudulent advertisements.

Exhibit 1: Ads next to unsuitable content

Two thirds of consumers would stop using a brand that advertises next to false, objectionable or inflammatory content

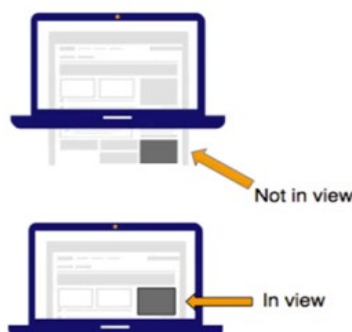


Source: Digiday, Harris Poll

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Exhibit 2: Ad placement off screen

~40% of Video Ads are never seen (2021)



Source: Company reports, 2021, BofA Global Research
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Exhibit 3: A real life click farm

~\$84bn of ~\$380bn of annual digital ad spend is lost to ad fraud



Source: core77 news, Juniper Research

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DoubleVerify: the Moody's of digital advertising

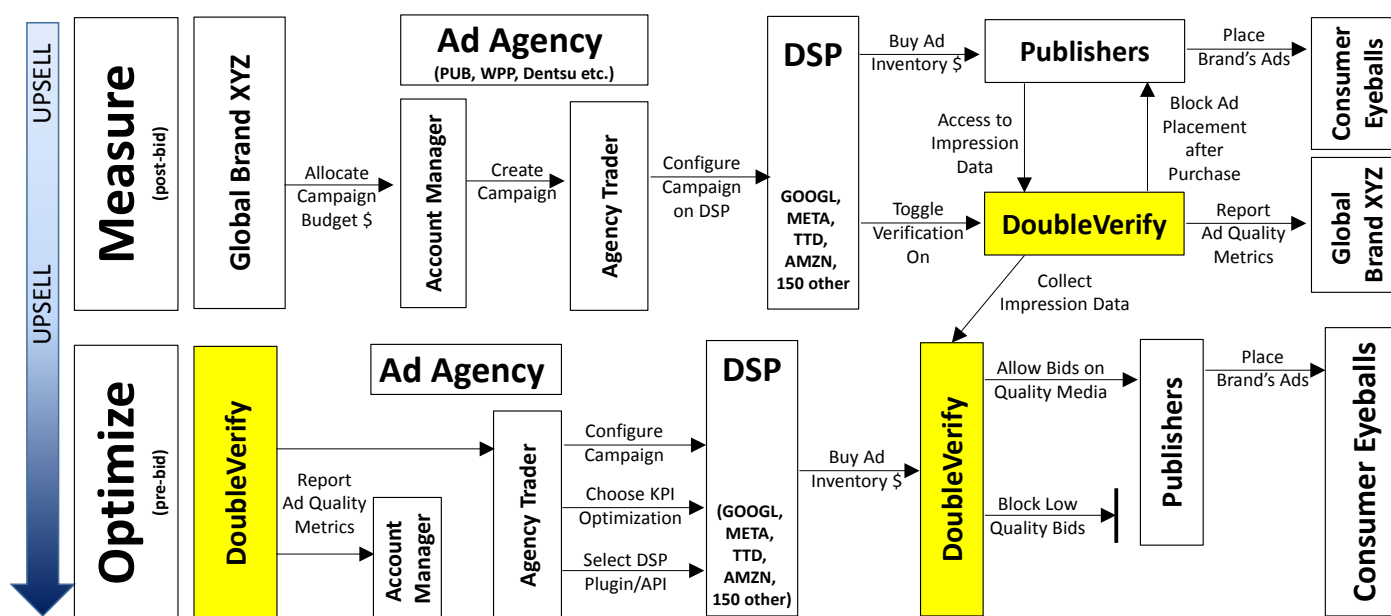
DoubleVerify ("DV"), through its software platform and metrics, helps preserve the fair value exchange between buyers and sellers of digital media. In this respect, it plays a role analogous to that of Moody's and S&P in the financial markets; in the same way that banks and bond funds refer to credit ratings (e.g. Aaa, Baa1, Caa1) as shorthand for the quality of the debt they buy, digital marketers refer to DoubleVerify's metrics as the common yardstick by which to compare the quality of the media they buy.

DV's two primary business segments address the two iterative stages of the digital ad campaign process: (1) measurement of results and (2) optimization of subsequent spend based on insights learned from measurements. Giving global brands tools to both evaluate and improve the effectiveness of their media spend.

- Measurement segment:** DV's Authentic Ad is a single metric that has become respected by the largest digital marketers: DV has retained 95% of revenue generated by clients who were active 3 years ago. Authentic Ads tells global brands whether an impression that has already been bought (aka "post-bid") is (1) fully viewed, (2) by a human, (3) in a brand suitable environment, (4) within the intended geography. The Authentic Ad metric was developed based on a proprietary methodology, which judging by its widespread adoption has been validated.
- Activation segment:** DV's four products are integrated into all major DSPs (Google, The Trade Desk, Amazon, etc.), enabling them to avoid bidding (aka "pre-bid") on media that is predicted to be inadequate to the specific campaign, thereby preventing the waste of ad budget. Marketers can greatly reduce the time required to iterate between measurement and campaign optimization by selecting the DoubleVerify. Over half of DV's top 700 customers have yet to use all of DV's Activation solutions, but among the top 100, usage is high, demonstrating its value.

Exhibit 4: DoubleVerify's position in the adtech stack and ad campaign workflow

DV's measurement products block ads that have already been purchased by the advertiser's DSP and report media quality directly to brands; DV's Activation products prevent the purchase of poor quality media from happening in the first place; Activation leverages data collected by DV's measurement technologies



Source: BofA Global Research

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Winner-take-most or duopoly market structure to emerge

It is still early days in the digital ad verification market. We expect that, eventually, the market will coalesce around at most two vendors, similar to the credit ratings market, with Moody's and S&P dominating. We think DoubleVerify is best positioned to emerge as the leader, and we think it likely that a second player, IAS, will achieve enough scale to become an alternative standard. We do not believe the market will support more than two vendors because global brands need:

- **Independence:** DSPs & ad agencies are not trusted to "grade their own homework." DV & IAS should become the most trustworthy arbiters of the quality of ad campaign spend because they do not, themselves, get paid to execute the campaigns.
- **Trusted methodologies:** We think global brands have limited use or capacity for numerous vendors, each with its own proprietary methodology. Digital marketers, C-suites, and Boards of global brands must learn and agree with each methodology underlying the metrics they implement across their global marketing organizations.
- **Pervasiveness:** New entrants will have difficulty establishing a presence *everywhere* global brands wants to advertise (e.g. Social, Open Web, Mobile, CTV, etc.) Walled Gardens (e.g. META, GOOGL) may not want to share data with numerous vendors.
- **Campaign Performance Improvement:** We think global brands are less likely to use third party vendors to optimize campaigns that use DV or IAS metrics. Both have the opportunity to innovate or acquire analytics companies with the benefit of a continuous conversation with global brands around their performance goals.

BofA forecast: 5Y Revenue CAGR > 20%

We estimate that advertisers using DV spent \$30bn on digital ads in 2022, implying 10% penetration of total Social, CTV, and Video/Display ad spend (~\$300bn). DV has consistently reported that ~70% of deals it wins are with customers who have never used its products.



We expect a 18% 5y CAGR for DV's Measurement segment. BofA expects Social Media revenue growth to remain strong, as DV management has called out (1) the launch of brand safety and suitability on Meta in early 2024 and (2) high growth [Short Form Video market](#) (30% CAGR through '28 per BofA). We model open web Display/Video and CTV markets to grow low-teens Y/Y through 2028, with industry ad spend forecasts. Numerous industry tailwinds such as Made-For-Advertising content, 3P cookie deprecation, and generative AI will pose challenges to digital marketers for many years, offering DV many opportunities to commercialize new solutions to emerging problems.

We expect 24% 5y CAGR for Activation revenues because of premium pricing, low penetration, and rapid uptake: (1) Authentic Brand Suitability ("ABS") fee-per-impression is almost 10x that of the basic Measurement, but is only used in ~8% of DV's impression volumes (BofA Est.), (2) ABS volumes among already engaged customers are surging. Activation products directly enhance campaign ROI, allowing DV to claim a share of the value created by any number of innovations it could commercialize in the future.

Exhibit 5: DV Revenue Growth Forecast, 2y & 5y, BofA

We expect Measurement segment revenues to outgrow combined digital ad spend in Display, Video, Social, and CTV; Activation will be driven by performance improving innovations

	'21A-'23E CAGR	BofA '23E-'25E CAGR	BofA '23E-'28E CAGR	2023E Mix %
Consolidated	31%	24%	21%	100%
Measurement (reported)	21%	22%	18%	35%
of which Social (BofA Est.)	35%	34%	24%	14%
of which Open Web, CTV (BofA Est.)	13%	14%	13%	20%
Activation (reported)	40%	27%	24%	57%
of which ABS (BofA Est.)	43%	29%	27%	30%
of which Other (BofA Est.)	37%	25%	21%	27%
Supply Side (reported)	24%	10%	10%	8%

Source: BofA Global Research, Company Reports

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Valuation – 37x CY24 EBITDA based on three approaches

We derive our \$47 PO by a 37x EV/NTM EBITDA ratio, which we derive using two distinct approaches. DoubleVerify could plausibly be compared to: (1) The Trade Desk (ticker TTD, not covered), (2) leading Information Services stocks (e.g. Moody's, MSCI, etc.).

We find Information Services stocks (MCO, CSGP, EFX, etc.) valuable for comparison because like them, DoubleVerify extracts and organizes data and offers analytics to improve performance of its customers' investment decisions. Because DoubleVerify is earlier in its growth trajectory, and we think its terminal growth rate will be ~500 basis points per annum higher than our basket of 13 Information Services stock. We estimate that DoubleVerify deserves an additional 14x on its EBITDA.

Exhibit 6: Two comp sets to estimate DV's valuation

DV could be compared to The Trade Desk, Information Services stocks

Comparable	CY24 EBITDA Multiple	Revenue CAGR (Street)	EBITDA Margin CY24	Similarity Rationale
TTD	38x	> 20% (5y)	39%	Market share leader among open web DSP
13 Info Services Stocks	23x	> 7% (2y)	41%	Leading data & analytics providers in their end markets
DoubleVerify (BofA valuation)	37x	> 20% (5y)	32%	\$219mn CY24 / \$275mn CY25

BofA Global Research, Factset, Visible Alpha

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High growth amidst unpenetrated market

Both Measurement and Activation segment revenues grew well above the rate of growth of the digital advertising market from 2020 to 2023 (~14% CAGR, ex-Search, according to Magna Global). We expect Measurement segment revenue to continue outgrowing its end markets in the medium term, but eventually we expect Y/Y growth to converge to that of its end market (low teens) once the market has fully adopted DV's products. We think Activation revenues are driven both by premium pricing as well as new product introductions, giving this segment a longer runway for above-trend growth.

Exhibit 7: BofA Revenue Estimates by Segment, 2023E-2028E

We expect Measurement revenues Y/Y growth to asymptote to the growth of the digital ad market; meanwhile Activation revenues have a longer runway due to the significant ASP uplift as more products are adopted

	2023E	2024E	2025E	2026E	2027E	2028E
Total Revenue	572	717	881	1,068	1,274	1,497
Measurement	199	247	298	351	401	449
of which Social platforms	81	113	147	182	211	237
of which Other	117	134	151	169	190	212
Activation	329	419	528	656	807	975
of which Auth. Brand Suitability	172	224	285	361	457	565
of which Other	156	195	244	295	349	410
Supply Side	45	50	55	61	67	73
Total Y/Y Growth	27%	25%	23%	21%	19%	17%
Measurement	26%	24%	21%	18%	14%	12%
of which Social platforms	39%	39%	30%	24%	16%	12%
of which Other	17%	15%	13%	12%	12%	12%
Activation	31%	28%	26%	24%	23%	21%
of which Auth. Brand Suitability	40%	30%	27%	27%	27%	24%
of which Other	22%	25%	25%	21%	18%	17%
Supply Side	4%	11%	10%	10%	10%	10%

Source: BofA Global Research

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DV touches only ~10% of Global Ad Spend

We estimate that DV's Measurement solutions touched ~\$30bn of digital ad spend in 2022, within a combined TAM (Social + Display/Video + CTV) of \$300bn (see Exhibit 8). Even within Global Brands segment of the market, where product market fit is strongest, we think adoption of Measurement solutions still has a long way to run.

Of the 867 largest global advertisers, DV only works with about 322 of them. DV has consistently reported that 60%-70% of its competitive wins sales wins are with customer who have never used a DV solution, implying they are new even to measurement. International markets (~10% of revenue) and middle market performance advertising agencies have yet to adopt its solutions. IAS, whose Measurement business is of similar size to DV's likely also touches 10% ad spend, suggesting that along with other vendors, total market penetration is below 30%.

We estimate a TAM of \$20bn for Measurement (aka verification) and Activation combined. Assuming that Activation fees top out at ~\$0.30 CPM, or 5% of average Display/Video CPM of \$6, we could envision a TAM of \$20bn, or 5% of projected 2025 digital ad spend of ~\$400bn. Full penetration of this TAM will required the introduction of products suitable for mid-tier and local advertisers and agencies, as well as an expansion of solutions across all channels in all geographies (Facebook, TikTok, YouTube, etc.).



Exhibit 8: Estimated market penetration by product, 2022

Advertisers measured ~\$30bn of ad spend using DoubleVerify in 2022, which is approximately 10% of global digital ad spend (ex-Search)

	Measurement:	Activation: non-ABS	Activation: ABS
Est. TAM Penetration	10%	2%	1%
DV Share of Spend	0.5%	2.0%	4.6%
Ad Spend Touched	\$31,614	\$6,403	\$2,646

BofA Global Research, Choozie, Company Reports; Note: assume weighted avg. Display/Video CPM = \$6.00

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Measurement on Social: Brand Safety a huge value prop

DoubleVerify is one of few verification vendors with accredited verification metrics for Meta & Google. This access was compelled by the advertisers, not just DoubleVerify, because of the inherent conflict of interest in rating the quality of their own media.

We model greater than 30% Y/Y Measurement revenue growth within Social channels because:

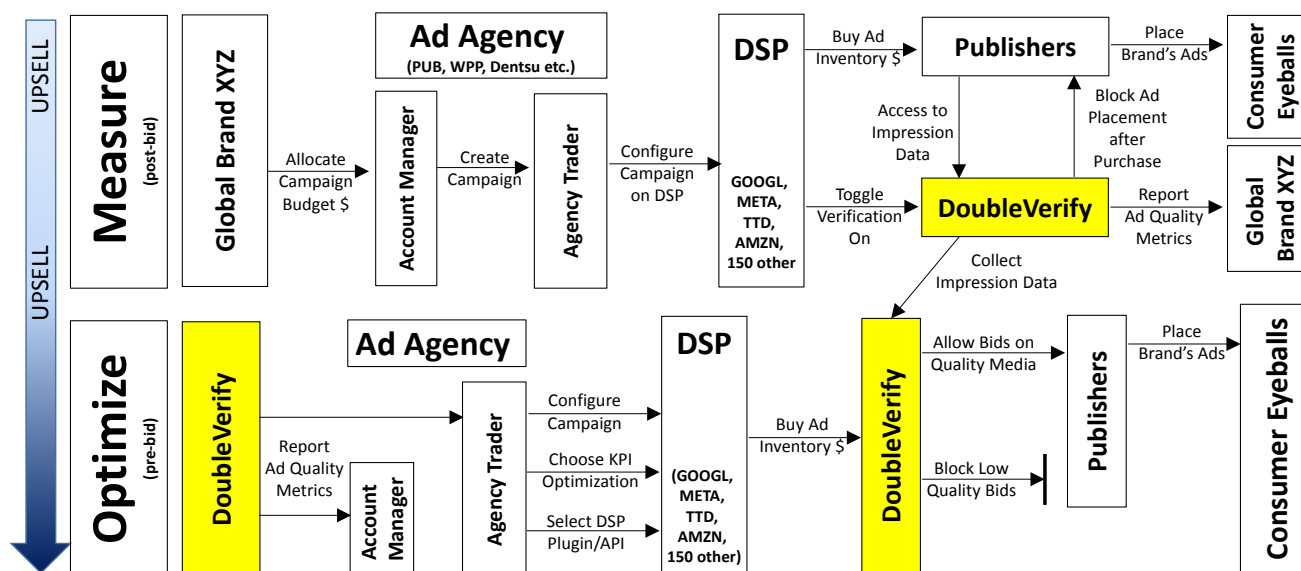
- In 2024, Advertisers will, for the first time be able to measure brand safety on Facebook and Instagram Feeds and Reels. Given the amount of polarizing and extreme content on Facebook properties, especially in an election year, we think brand safety and suitability will be the most compelling value proposition to brands to date: according to a study that DV commissioned with The Harris Poll, nearly two-thirds of consumers expressed that they would stop using a brand or product that advertises next to false, objectionable or inflammatory content. 50% of DV customers already use viewability and invalid traffic measurement on Meta properties, suggesting a straightforward adoption brand safety.
- At a high level, DV has not fully penetrated Social: it comprises ~60% of global ad spend, but only ~40% of DV Measurement revenues in 2023E. As the leading internet companies of the world innovate to find new ways to engage users to stimulate their ad-driven business models, DV will likely be called in at some point to verify each new form of content. For example, BofA expects [Short Form Video](#) ad spending to grow 30% compounded through 2028.

Activation: attach rate low, ASP 10x higher

DV charges customers a separate, fixed fees (“Measured Transaction Fee”) for (1) each impression its software measures post-bid, and (2) each impression it influences pre-bid. Advertisers and agencies usually enter the sales funnel through DV’s low-fee measurement products, which are considered table stakes for verification vendors. After advertisers learn about the quality level of the media they buy, many naturally want to improve the performance of their impressions by purchasing its Activation products (aka “Optimize”, see Exhibit 9). Customers “toggle on” specific Activation solutions within their DSP, with each solution having its own per-impression fee, usually disclosed on an a-la-carte menu obtained from the DV salesperson.

Exhibit 9: DoubleVerify’s position in the adtech stack and ad campaign workflow

DV’s measurement products block ads that have already been purchased by the advertiser’s DSP and report media quality directly brands; DV’s Activation products prevent the purchase of poor quality media from happening in the first place; Activation leverages data collected by DV’s measurement technologies



Source: BofA Global Research

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We estimate that only 19% of impressions measured by DV post-bid utilized an Activation solution (see Exhibit 10). In 23Q1, 94 of DV’s top 100 clients used ABS, but volumes grew 55% Y/Y suggesting surging penetration of individual ad budgets. Moreover, through innovation, DV can deliver new products other than ABS, such as Custom Contextual and Scibids, which are even higher priced solutions for power users.

Exhibit 10: Estimate attach rates (per impression) of Activation products, 2022

Activation products have a long runway for adoption, with only ~8% to ~19% attach rate by YE22

	Overall	Measure-ment:	Activation: non-ABS	Activation: ABS
Attach Rate	100%	95%	19%	8%
Volume (MTM)	5,543	5,266	1,066	442
ASP (MTF)	\$0.07	\$0.03	\$0.12	\$0.28
DV Revenue (CY22)	\$409	\$158	\$128	\$123

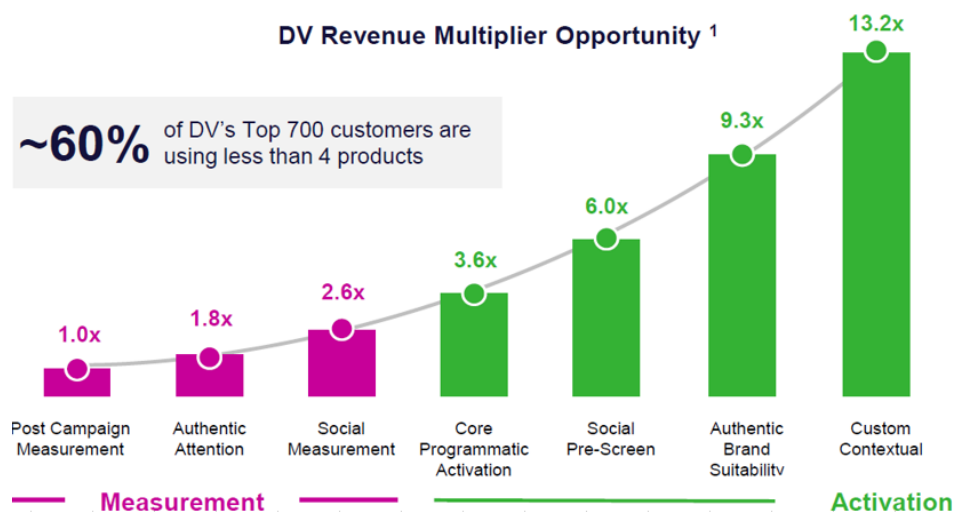
BofA Global Research, Choozle, Company Reports; Note: assume weighted avg. Display/Video CPM = \$6.00

BofA GLOBAL RESEARCH

Surging attach rates of ABS and other Activation solutions are supportive of our 25% CAGR because the fee-per impression (like a CPM) is an order of magnitude higher than Measurement fees (see Exhibit 11). 60% of customers have yet to adopt the full suite of Activation products, (2) we regard Activation as fertile ground for the introduction of new, high value added products.

Exhibit 11: DV's seven core products and relative fixed transaction fee rates

Fixed transaction fees for Activation products can be an order of magnitude higher than Measurement



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Activation – ABS: A productivity enhancing product

Authentic Brand Suitability (“ABS”) is a premium product (ASP 10x core measurement) that helps automate workflows, across channels and DSPs, for Agency Traders looking to ensure that ads will be shown next to suitable content. Although it is possible to manually configure some DSPs to avoid most unsuitable content, in practice, Agency Traders prefer to use their time evaluating results and refining KPIs to drive higher ROAS. From within the advertiser’s DSP, ABS automatically blocks bids on media sources predicted to be unsuitable, thereby preventing wasted ad spend.

Activation – Other products: Innovations + M&A driven

DV can commercialize numerous new activation products given the customer intimacy it enjoys by virtue of its Measurement and Activation products. For example, its recent acquisition, Scibids, allows DSP power users to enhance ROI by optimizing on KPIs that are customized to the specific campaign objective (see Exhibit 12).

Individual advertisers run very distinct businesses, and thus have distinct KPIs against which they optimize to maximize ROI

$$QCPM = \frac{eCPM \times frequency}{Viewability\ TCCC\% / Brand\ Safety\% / (100\% - IVT\%)}$$

Viewability TCCC % = Viewable Impressions [XX% in view, X sec display, X sec video] / Measured Ads [XX% in view, X sec display, X sec video]

Brand Safety % = Passed Ads/Total Eligible Ads For Brand Safety

IVT % = Invalid Traffic/Eligible Ads For Invalid Traffic Detection

Source: Company Reports

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Exhibit 13: Examples of Standard KPIs

Standard KPIs reported by DSPs are helpful, but are blunt tools that don't necessarily correlate to ROI for an advertiser's specific business

Performance KPIs

Maximize conversions

Maximize clicks

Cost per Acquisition (CPA)

Click-Through-Rate (CTR)

Return-on-Ad-Spend (ROAS)

Brand KPIs

Maximize viewable impressions

Maximize complete in-view
and audible

Maximize viewable for at least 10 seconds

Source: Company Reports

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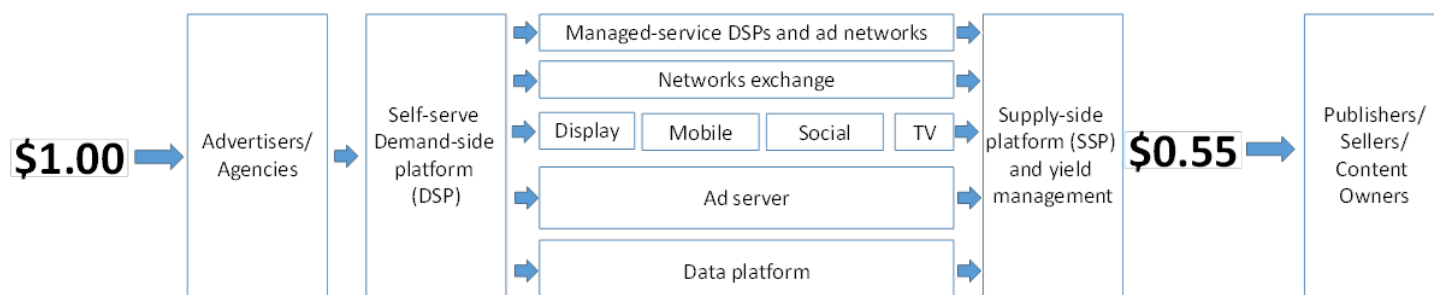
Helping hold digital advertising intermediaries accountable

Brands have limited control over execution (and waste)

In both the open web and walled gardens (e.g. META, GOOGLE, TikTok, etc.), advertisers rely on a chain of intermediaries to execute the purchase of media through which it will reach the intended consumer. It is frequently unclear whether using a certain DSP, paying a certain agency, or buying a certain 3P data source would result in more effective influence of the desired audience. Ad agencies and in-house marketing teams iterate to optimize as a campaign unfolds, but this too has a cost. The result is all too often wasted ad spend; some estimate that on average, only \$0.55 of every \$1.00 spent by advertisers ultimately reaches publishers, including low-quality impressions (see Exhibit 14).

Exhibit 14: Digital Advertising Intermediaries and Spend Efficiency

Numerous intermediaries, in aggregate, consume about \$0.45 of every ad dollar spent by brands on the open web



Source: BofA Global Research, The Trade Desk (2019)

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Measurement: finding metrics everyone can agree on

Any number of actors within the value chain of digital advertising could be a source of sub-optimality. Although measurement products are not a silver bullet for diagnosing sources of waste, they give intermediaries working with one another a common yardstick around which to evaluate performance. We believe, all actors in the ecosystem have an incentive to learn and adopt verification methodologies such as DoubleVerify's (see Exhibit 15). Moreover, we believe **digital marketing professionals** working across the industry are incentivized to learn and adopt DoubleVerify's methodologies because they are a portable skill set and often cited as a job requirement.

Brands: A common, trusted methodology can help C-suite executives and Boards evaluate the effectiveness of their often spread-out marketing organizations and partners. Companies with multi-billion dollar advertising budgets are faced with the daunting task of finding platforms with enough reach to influence their already large consumer bases. As consumers' viewing habits move from linear media to digital, more of their ad budgets will have to become exposed to the risks of the digital ecosystem.

Agencies: To maintain relevance with Brands, we think the agency business model will become more outcomes-driven, begging the question: how will outcomes be measured? Agencies commonly charge on an hourly rate per FTE or project basis, meaning that they get paid more by the brand for expending more resources. Agencies seldom have an incentive to criticize their own performance to their clients. Nonetheless, agencies are frequently the only sources of talent to execute large complex campaigns for Brands.

Demand Side Platforms (DSP): DSPs' revenues are usually a percentage of total spend executed through their platforms, giving them little incentive to go out of their way to minimize low-quality spend. DSPs seldom have an incentive to criticize their own performance, given the numerous alternatives in the market.

Exhibit 15: Matrix of dependences between digital advertising intermediaries

All actors in the digital advertising ecosystem are incentivized to learn and adopt DoubleVerify's software & methodologies

	Brands	Agencies	Demand Side Platforms	Publishers
Brands	<ul style="list-style-type: none"> • Report marketing organization performance to C-suite & Board • Evaluate in-house brand managers, regional marketing offices • Compare in-house performance to that of Agencies • Avoid fixed costs of having to build proprietary quality infrastructure 	<ul style="list-style-type: none"> • Compare performance b/w Agencies • Agency using budget efficiently from an FTE perspective? • Reduce conflicts of interest around reporting of campaign performance • Maintain relevance as experts • DV Contract pricing is well known 	<ul style="list-style-type: none"> • How well does the DSP avoid bad traffic? • Is DSP's own reporting accurate? • Is expensive 3P data worth it? • Can you customize KPIs for my business? • Demonstrate transparency 	<ul style="list-style-type: none"> • Standard to compare media quality by platform/publisher • Publishers can focus on growing content & audiences rather than policing advertising
Agencies		<ul style="list-style-type: none"> • Train/recruit staff to know a widely used methodology • Compare performance between numerous Holdco subsidiaries • Avoid fixed costs of having to build proprietary quality infrastructure 	<ul style="list-style-type: none"> • Compare DSP quality • Is DSP's own reporting accurate? • Is expensive 3P data worth it? • Can you customize KPIs for my specific campaign? • Free resources from tedious configuration work 	<ul style="list-style-type: none"> • Evaluate major publishers and platforms with direct agency relationships
Demand Side Platforms			<ul style="list-style-type: none"> • Train/recruit staff to know a widely used methodology • Innovate DSP to avoid bad traffic 	<ul style="list-style-type: none"> • Have common quality standards publishers can try to adhere to

Source: BofA Global Research

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Rigorous methodologies, but easy to consume

For the digital advertising professionals to integrate DoubleVerify's products into their management processes & conversations, they must be credible and understandable.

DoubleVerify has trademarked several proprietary KPIs:

DV Authentic Ad (Measurement) delivers performance measurements across fraud, brand safety, viewability and geography into a single, unique metric. DV claims it is the only company accredited to measure and de-duplicate ad quality in this manner — enabling brands to use the Authentic Ad count as a defining, holistic KPI for campaign effectiveness. DV also has the flexibility to disaggregate and analyze the individual measurements for each delivered ad. DV also provide regional and device specific benchmarking to help client teams better contextualize performance and media quality relative to the rest of DV's measurement ecosystem (Exhibit 16).

Exhibit 16: DV Authentic Ad sub-components & methodology

An impression is counted as an Authentic View if it is fully viewed, by a real person, in a brand suitable environment, and within the intended geography

	APAC	EMEA	LATAM	NORTH AMERICA	TOTAL
Authentic Viewable Rate	64%	66%	72%		69%
Fraud Rate	1%	1%	1%		1%
Brand Suitability Violation	6%	9%	6%		5%
Display Viewable Rate	66%	69%	75%		72%
Video Viewable Rate	79%	80%	75%		76%
Video Completion Rate					77%
Video Audible Rate					20%
Audible & In-View on Completion Rate					12%

Source: Company Reports (Q3 Benchmarking Report)

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DV Authentic Attention™ (Measurement) is an actionable attention score that provides directional insight into performance, based on 50+ data points that are calculated in real time on 65 billion impressions measured per month.



Exhibit 17: Components of DV Authentic Attention score

Authentic attention measures the prominence and intensity of the ad experience as well as user presence and the depth of user engagement within the ad experience

Sub-Measure	Definition
Exposure Index	An ad's entire presentation, quantifying its intensity and prominence through metrics that include viewable time, share of screen, video completion, audibility, and more.
Engagement Index	Key user-initiated events that occur while the ad creative is displayed, including user touches, screen orientation, video playback, and audio control interactions.
Prominence Index	The viewable pixels of an ad relative to the entire screen real estate of the device.
Intensity Index	Display - the viewable time of the ad onscreen; Video - IAB viewability, audibility, whether the player is fully on-screen, and rate of completion through the four quartiles of the video creative.
User Presence Index	A binary measure that evaluates if a user was present at the device when the ad was viewable.
Ad Interaction Index	The level at which a user has directly interacted with the ad while it was viewable.

Company Reports

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One-stop shop appeals to the largest advertisers

We believe that advertisers with the largest budgets (and their agencies) will look to minimize complexity by using one, or perhaps two independent vendors at most. To emerge as a winner, we believe a vendor must: (1) have sufficiently broad suite of measurement tools, (2) cover all channels (i.e. Social, Web, CTV, etc.) that global brands use to reach consumers, (3) offer high-touch customer service.

Accredited measurement tools: DoubleVerify appears to have the broadest suite of accredited measurement tools, 41 in all, across geographies, platforms, and channels (see Exhibits 18, 19, 20). Accreditations lubricate the sales process because they signify that a vendor meets a gold standard for media measurement. Very often during RFPs vendors are asked how many accreditations they have and what accreditations they are working towards. Moreover, a consolidated metric like DV Authentic Ad, which is based on multiple metrics limits the need to buy multiple point solutions from other vendors.

Channel Coverage: While every brand and vertical has its favorite channel, the sheer size of a global brand's marketing budget usually means that it ends up on almost every channel available. Moreover, demographic trends, as well as media innovation, favor a shift towards digital channels at the expense of linear.

Privileged Walled Gardens access: DoubleVerify is one of only three independent vendors with privileged access to two of the largest media sources in the world: Google & Meta properties (see Exhibit 18). Google & Meta worked to integrate these vendors at the behest of advertisers, demonstrating their importance to the market. First party solutions provided by both companies are also accredited, but subject to conflicts of interest because neither company is incentivized to deliver bad news to advertisers.

Exhibit 18: MRC accreditations, Walled Gardens, by service

Only three independent vendors measure quality within Facebook & Google mobile apps, mobile web, and desktop (omitted, but present)

			Facebook				Google		
		Total	Video		Display		Invalid Traffic	Video	
			Rendered Ad Impressions	Viewable Ad Impressions & Viewability	Rendered Ad Impression	Viewable Ad Impressions and Viewability	detection/ filtering	Rendered Ad Impressions	Viewable Ad Impressions & Viewability
Mobile Apps	DV	6							
	OracleMoat	6							
	IAS	4							
	Meta	3							
	Google	2							
Mobile Web	DV	6							
	OracleMoat	4							
	IAS	4							
	Meta	2							
	Google	2							

Media Rating Council, BoFA Global Research

BoFA GLOBAL RESEARCH

Mobile Web & Mobile In-App advertising: DoubleVerify (and IAS) offer the highest number of accredited metrics to advertisers looking to measure the quality of Display and Video ads on Mobile Web, Mobile In-App, and Desktop platforms (see Exhibits 19, 20). Although eight other independent vendors appear to offer accredited Rendered Ad Impression and Viewable Ad Impression metrics, DoubleVerify offers additional services such as Invalid Traffic Detection, Attention Metrics, and Ad Verification signifying that it has a lead in the product development process.

Exhibit 19: MRC accreditations, Mobile In-App, Open Web, by service

DoubleVerify and IAS lead the field in completeness of offerings to verify open web media quality

		Video						Display				Invalid Traffic		Other
		Rendered Ad Impressions	Viewable Ad Impressions & Viewability	Clicks	Tracked Ads	Authentic Attention Metrics	Rendered Ad Impressions	Viewable Ad Impressions & Viewability	Clicks	Tracked Ads	Detection/ filtering	Pre-bid detection	Ad Verification (Property Level)	
	Total													
GoogleDV360	7													
DV	7													
IAS	7													
Flashtalking	7													
Pixalate	6													
GoogleCM360	6													
Adloox	6													
HUMAN	6													
OracleMoat	5													
ProtectedMedia	5													
Adform	4													
GoogleAdManager	4													
GoogleAds	4													
Innovid	4													
Snap	4													
Epsilon	2													
FreeWheel	2													
Pinterest	2													
ExtremeReach	1													
Hulu	1													

Source: Media Rating Council, BofA Global Research

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Exhibit 20: MRC accreditations, Mobile Web, Open Web

DoubleVerify and IAS lead the field in completeness of offerings to verify open web media quality

		Video					Display				Invalid Traffic		Other		
	Total	Rendered Ad Impressions	Viewable Ad Impressions & Viewability	Tracked Ads	Clicks	Authentic Attention Metrics	Rendered Ad Impression	Viewable Ad Impressions and Viewability	Clicks	Tracked Ads	detection/ filtering	Pre-bid detection	Ad Verification (Property Level)	Brand Safety Processes (content level)	Correlated Outcomes Online offline
IAS	5														
DV	4														
GoogleCM360	4														
GoogleDV360	4														
Adloox	4														
Flashtalking	4														
Pixalate	4														
HUMAN	4														
OracleMoat	4														
ProtectedMedia	3														
Adform	2														
Innovid	2														
Epsilon	2														
FreeWheel	1														
LinkedIn^	2														
Pinterest	2														
ExtremeReach	1														
GumGum	1														
Hulu	1														
Microsoft	1														

Source: Media Rating Council, BofA Global Research

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CTV advertising: DV and IAS appear slightly behind HUMAN and Pixalate in the number of accreditations they have received. We remind readers that accreditation is constantly in the works with firms like these and that a fulsome portfolio of accredit offerings across channels can help win RFPs without necessarily having all accreditations.

Exhibit 21: MRC accreditations, CTV, by service

CTV is an emerging platform, with fewer vendors accredited and fewer metrics available

	Total	Video		Viewable Ad Impressions & Viewability	Display		Invalid Traffic		Ad Verification (Property Level)	Brand Safety Processes (content level)
		Rendered Ad Impressions	Tracked Ads		Rendered Ad Impression	Tracked Ads	detection/ filtering	Pre-bid IVT detection		
HUMAN	6									
Pixalate	5									
DV	4									
IAS	3									
Adform	2									
FreeWheel	2									
GoogleAds	2									
GoogleDV360	2									
GoogleYouTubeReserve	2									
Hulu	2									
OracleMoat	2									
ProtectedMedia	2									
FlashTalking	2									
ExtremeReach	1									
Innovid	1									
GumGum	1									

Media Rating Council, BofA Global Research

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Valuation: Adtech? Info Services? A bit of Each?

The Trade Desk is best comp among AdTech stocks

The use of a 37x EV/EBITDA ratio may not be an obvious valuation multiple if an investor were to use the universe of advertising technology stocks. We view TTD, which has consistently grown > 20% Y/Y, as the only AdTech comparable that would make sense. The remainder of the AdTech universe appears subscale or undervalued.

Exhibit 22: Comparable Company Analysis - Global AdTech & Self Attributing Networks

Our comparator set includes AdTech companies and Self Attributing Networks

			EV/Sales				Sales	EV/EBITDA				EBITDA				
			(Consensus)				CAGR	Consensus				CAGR	EBITDA Margin			
Company	Ticker	Price	2022A	2023E	2024E	2025E	CY23-CY25	2022A	2023E	2024E	2025E	CY23-CY25	2022A	2023E	2024E	2025E
Advertising Technology																
AppLovin Corp.	APP US	\$38.11	6.1x	5.3x	4.5x	4.0x	15%	16.2x	11.8x	9.4x	8.3x	19%	38%	45%	48%	49%
Trade Desk	TTD US	\$67.64	21.9x	18.0x	14.9x	12.4x	21%	51.9x	45.5x	38.0x	30.9x	21%	42%	40%	39%	40%
Integral Ad Sciences	IAS US	\$14.17	6.2x	5.4x	4.6x	4.0x	15%	20.0x	16.0x	13.6x	11.5x	18%	31%	34%	34%	35%
DoubleVerify	DV US	\$34.25	13.1x	10.4x	8.4x	6.9x	23%	41.9x	32.8x	27.0x	21.6x	23%	31%	32%	31%	32%
Magnite	MGNI US	\$8.90	2.8x	2.8x	2.6x	2.4x	9%	9.0x	9.7x	8.7x	7.3x	15%	31%	29%	30%	32%
PubMatic	PUBM US	\$14.86	2.7x	2.6x	2.4x	2.1x	10%	7.0x	9.3x	8.1x	6.5x	20%	38%	28%	29%	33%
Criteo	CRTO US	\$24.16	1.3x	1.2x	1.2x	1.1x	6%	4.6x	4.4x	4.2x	3.7x	10%	29%	27%	28%	30%
Unity Software, Inc.	U US	\$37.78	12.3x	8.1x	7.2x	6.1x	15%	NA	45.4x	27.5x	20.5x	49%	(4%)	18%	26%	30%
Digital Turbine, Inc.	APPS US	\$6.28	1.5x	1.7x	1.6x	1.3x	13%	6.1x	9.2x	7.8x	5.8x	26%	25%	19%	20%	23%
Zeta Global	ZETA US	\$8.13	3.1x	2.5x	2.1x	1.8x	17%	19.9x	14.5x	11.5x	9.1x	26%	16%	17%	19%	20%
Live Ramp	RAMP US	\$34.49	3.8x	3.3x	3.1x	2.9x	7%	41.8x	30.5x	19.3x	14.1x	47%	9%	11%	16%	20%
Viant	DSP US	\$6.82	1.3x	1.2x	1.0x	0.9x	13%	NA	9.6x	7.8x	6.0x	27%	(3%)	12%	13%	15%
Adtheorant	ADTH US	\$1.85	0.4x	0.4x	0.4x	0.4x	11%	3.3x	3.8x	3.3x	2.8x	18%	13%	11%	12%	13%
Taboola	TBLA US	\$4.31	1.1x	1.0x	0.8x	0.6x	28%	9.4x	18.5x	7.3x	5.4x	84%	11%	5%	11%	11%
Roku	ROKU US	\$89.29	3.6x	3.3x	3.0x	2.6x	12%	NA	NA	104.6x	42.0x	NA	(3%)	(1%)	3%	6%
Index			6.6x	5.7x	4.9x	4.3x	15%	34.4x	25.8x	19.5x	15.7x	28%	19%	22%	25%	27%

Source: Visible Alpha, Factset, Bloomberg

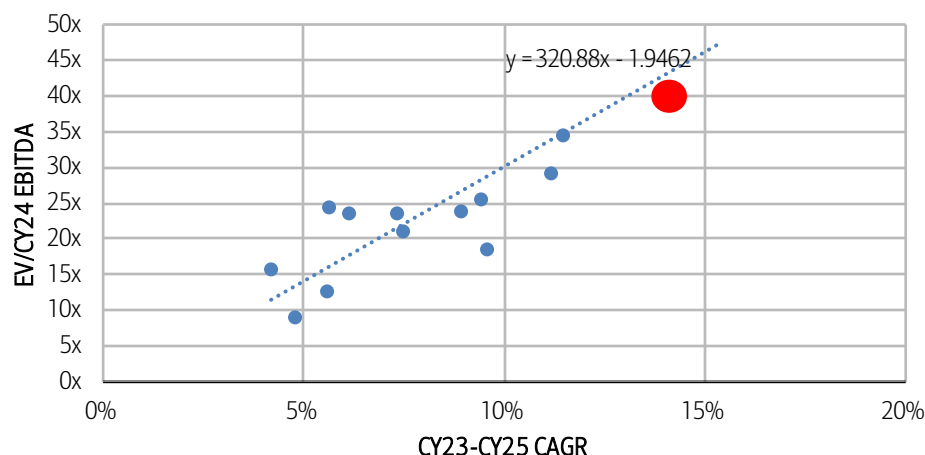
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DoubleVerify as a nascent Information Services leader

As a second valuation approach we consider DoubleVerify's valuation as a mature information services leader, growing at a rate slightly higher than that of the digital advertising industry (~13% CAGR). Because the terminal growth rate of digital advertising is likely higher than that of information services, we would expect DoubleVerify to trade a significant premium to this comp set, at least ~37x EV/EBITDA.

Exhibit 23: Growth vs. Valuation, Information Services

A terminal growth rate of 13% Y/Y would imply a valuation of around 37x EV/CY24 valuation for DV if one were to value DV as an information services stock



Factset, Visible Alpha, BofA Global Research

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Exhibit 24: Comparable Company Analysis - Information Services

Information Services stocks are expected to grow at about 7% Y/Y because their end markets are mature and less driven by high tech innovation

			EV/Sales				Sales	EV/EBITDA				EBITDA				
			(Consensus)				CAGR	Consensus				CAGR	EBITDA Margin			
Company	Ticker	Price	2022A	2023E	2024E	2025E	CY23-CY25	2022A	2023E	2024E	2025E	CY23-CY25	2022A	2023E	2024E	2025E
Information Services																
Costar	CSGP US	\$81.34	14.5x	12.9x	11.3x	9.7x	15%	47.0x	64.7x	56.0x	39.8x	(8%)	31%	20%	20%	24%
Fair Isaacs	FICO US	\$1,115.46	22.8x	20.7x	18.5x	16.7x	11%	46.9x	40.1x	34.7x	29.7x	16%	49%	52%	53%	56%
MSCI	MSCI US	\$538.05	21.5x	19.4x	17.3x	15.7x	11%	36.4x	32.5x	29.2x	26.2x	12%	59%	60%	59%	60%
Equifax	EFX US	\$237.02	7.2x	7.0x	6.4x	5.8x	10%	21.3x	21.7x	18.7x	16.1x	7%	34%	32%	34%	36%
Moody's	MCO US	\$371.69	14.0x	13.0x	11.8x	10.8x	9%	33.0x	29.3x	25.6x	22.9x	13%	43%	44%	46%	47%
Gartner	IT US	\$425.37	6.8x	6.3x	5.8x	5.3x	9%	25.2x	25.4x	23.9x	21.5x	3%	27%	25%	24%	25%
S&P Global	SPGI US	\$427.93	13.6x	12.2x	11.4x	10.6x	8%	24.0x	23.1x	21.1x	19.4x	7%	57%	53%	54%	55%
Verisk	VRSK US	\$233.70	12.4x	13.9x	13.0x	12.1x	7%	25.6x	26.1x	23.6x	21.8x	4%	49%	53%	55%	55%
Factset	FDS US	\$456.58	10.7x	9.5x	8.9x	8.4x	6%	29.8x	25.0x	23.7x	22.0x	12%	36%	38%	38%	38%
Trans Union	TRU US	\$64.99	4.9x	4.8x	4.6x	4.3x	6%	13.5x	13.7x	12.8x	11.4x	3%	36%	35%	36%	38%
Thomson Reuters	TRI US	\$143.93	10.2x	10.0x	9.5x	8.9x	6%	29.1x	25.6x	24.5x	22.5x	9%	35%	39%	39%	40%
Dun & Bradstreet	DNB US	\$11.97	4.0x	3.8x	3.7x	3.5x	5%	10.2x	9.8x	9.1x	8.7x	6%	39%	39%	40%	40%
TechTarget	TTGT US	\$33.95	3.9x	5.0x	5.0x	4.6x	4%	9.4x	16.3x	15.8x	13.4x	(23%)	41%	31%	31%	35%
Median			10.7x	10.0x	9.5x	8.9x	8%	25.6x	25.4x	23.7x	21.8x	7%	39%	39%	39%	40%
Average			11.3x	10.6x	9.8x	8.9x	8%	27.0x	27.2x	24.5x	21.2x	5%	41%	40%	41%	42%
Index			11.2x	10.5x	9.8x	9.0x	7%	26.6x	25.4x	23.2x	20.8x	7%	42%	41%	42%	43%

Source: Visible Alpha, Factset, Bloomberg

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BofA Financial Estimates vs Street

Exhibit 25: BofA vs Street Forecasts, FY22 to FY28

We forecast 5-year revenue CAGR of >20%, driven by above trend growth in Measurement (18% CAGR) and hypergrowth in Activation sales (24% CAGR)

	2022	23Q1	23Q2	23Q3	23Q4E	2023E	2024E	2025E	2026E	2027E	2028E
Total Revenue											
B of A (Initiation)	452	123	134	144	172	572	717	881	1,068	1,274	1,497
STREET					172	572	707	865	1,042	1,241	1,449
Delta vs. STREET					0.0%	0.0%	1.4%	1.9%	2.4%	2.7%	3.3%
GUIDE						572	-	-	-	-	-
Total Revenue YoY Growth %											
B of A (Initiation)	36.0%	26.7%	21.8%	28.3%	28.7%	26.5%	25.2%	23.0%	21.2%	19.3%	17.5%
STREET					28.7%	26.5%	23.5%	22.3%	20.5%	19.0%	16.8%
Delta vs. STREET					0.0%	0.0%	1.7%	0.7%	0.6%	0.3%	0.7%
GUIDE						26%					
Measurement (Direct) Revenue											
B of A (Initiation)	158	41	45	51	61	199	247	298	351	401	449
STREET					61	198	238	284	314	346	375
Delta vs. STREET					0.8%	0.2%	3.8%	5.0%	11.8%	15.7%	19.7%
Measurement (Direct) Revenue Y/Y Growth											
B of A (Initiation)	16.5%	22.3%	15.6%	32.0%	32.1%	25.9%	24.4%	20.5%	17.7%	14.3%	12.0%
STREET					31.1%	25.6%	20.2%	19.1%	10.6%	10.4%	8.3%
Delta vs. STREET					1.1%	0.3%	4.2%	1.4%	7.1%	3.9%	3.7%
Activation (Programmatic) Revenue											
B of A (Initiation)	251	70	78	82	99	329	419	528	656	807	975
STREET					100	329	421	530	672	833	1,003
Delta vs. STREET					-0.5%	-0.2%	-0.4%	-0.3%	-2.4%	-3.1%	-2.8%
Activation (Programmatic) Revenue Y/Y Growth											
B of A (Initiation)	49.7%	31.8%	28.8%	31.4%	31.1%	30.8%	27.6%	26.0%	24.3%	22.9%	20.8%
STREET					31.8%	31.0%	27.9%	25.9%	26.9%	23.8%	20.5%
Delta vs. STREET					-0.7%	-0.2%	-0.3%	0.2%	-2.7%	-0.9%	0.4%
Supply-side Revenue											
B of A (Initiation)	43	11	11	11	12	45	50	55	61	67	73
STREET					12	45	48	51	56	62	71
Delta vs. STREET					0.6%	0.2%	4.7%	7.2%	7.7%	8.0%	2.9%
Supply-side Revenue Y/Y Growth											
B of A (Initiation)	47.2%	14.8%	3.9%	-2.0%	-0.1%	3.8%	11.3%	10.0%	10.0%	10.0%	10.0%
STREET					-0.7%	3.6%	6.4%	7.4%	9.5%	9.7%	15.5%
Delta vs. STREET					0.6%	0.2%	4.8%	2.6%	0.5%	0.3%	-5.5%
Operating Income - NON-GAAP											
B of A (Initiation)	107	27	30	35	49	141	178	240	314	394	489
STREET					48	140	175	227	294	367	466
Operating Margin - NON-GAAP											
B of A (Initiation)	23.7%	22.0%	22.7%	24.3%	28.3%	24.6%	24.9%	27.3%	29.5%	30.9%	32.7%
STREET					28.1%	24.5%	24.8%	26.3%	28.2%	29.6%	32.2%
Adj. EBITDA											
B of A (Initiation)	142	36	40	46	59	181	221	285	359	440	538
STREET					59	181	219	275	341	413	502
Delta vs. STREET					0.1%	0.1%	1.0%	3.7%	5.3%	6.5%	7.1%
GUIDE						181	-	-	-	-	-



Exhibit 25: BofA vs Street Forecasts, FY22 to FY28

We forecast 5-year revenue CAGR of >20%, driven by above trend growth in Measurement (18% CAGR) and hypergrowth in Activation sales (24% CAGR)

Adj. EBITDA Margin %											
B of A (Initiation)	31.3%	29.3%	29.9%	31.7%	34.5%	31.6%	30.9%	32.4%	33.6%	34.5%	35.9%
STREET					34.5%	31.6%	31.0%	31.8%	32.7%	33.3%	34.6%
Delta vs. STREET					0.0%	0.0%	-0.1%	0.6%	0.9%	1.2%	1.3%
GUIDE						31.6%					
Free Cash Flow											
B of A (Initiation)	55	17	7	31	23	79	132	174	215	266	329
STREET					31	86	125	157	214	270	329
Delta vs. STREET					-25.1%	-8.5%	5.4%	10.6%	0.5%	-1.4%	0.0%

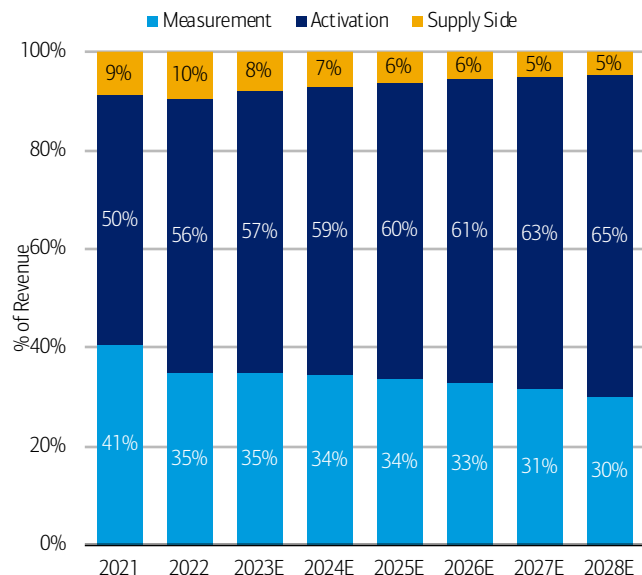
Source: Company Reports, BofA Global Research estimates

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Appendix

Exhibit 26: BofA Revenue Mix by Segment, 2023E-2028E

We expect mix shift into Activation as the segment outgrows consolidated topline driven by premium pricing and new product introductions

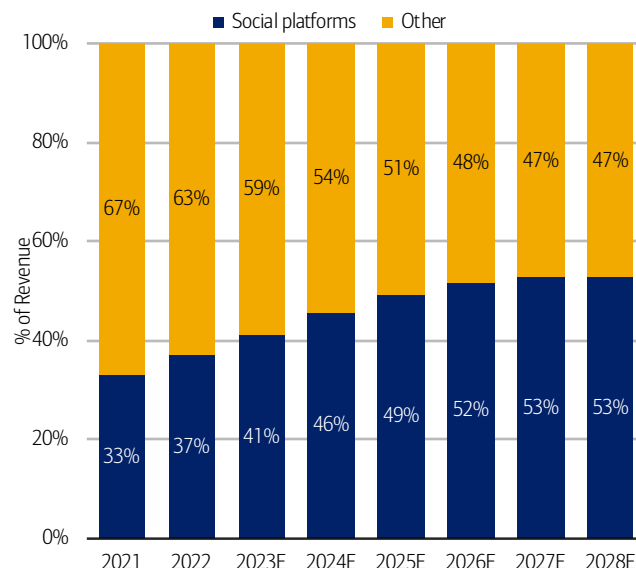


Source: Company Reports, BofA Global Research

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Exhibit 27: Measurement Revenue Mix Forecast by Industry Sub-Vertical, 2021 - 2028E

We see revenue from Social platforms as the primary driver of Measurement revenue, benefiting from growth tailwinds in end markets such as Short Form Video

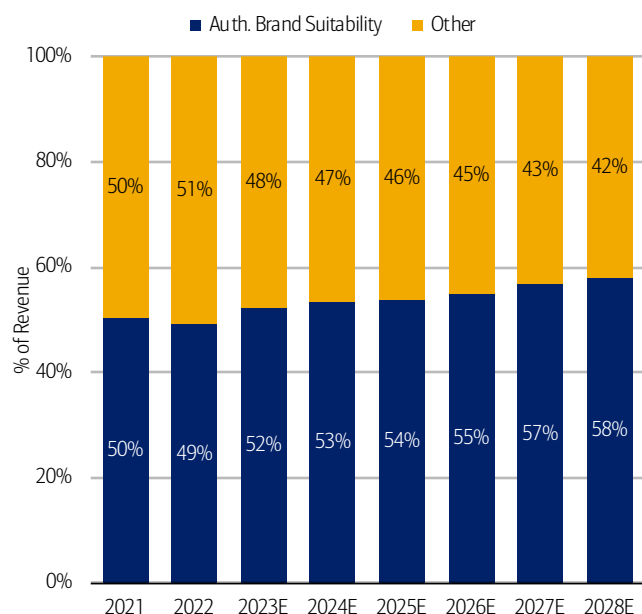


Source: Company Reports, BofA Global Research

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Exhibit 28: Activation Revenue Mix Forecast by Product, 2021 - 2028E

We expect revenue contribution from Authentic Brand Suitability to increase over time as adoption improves

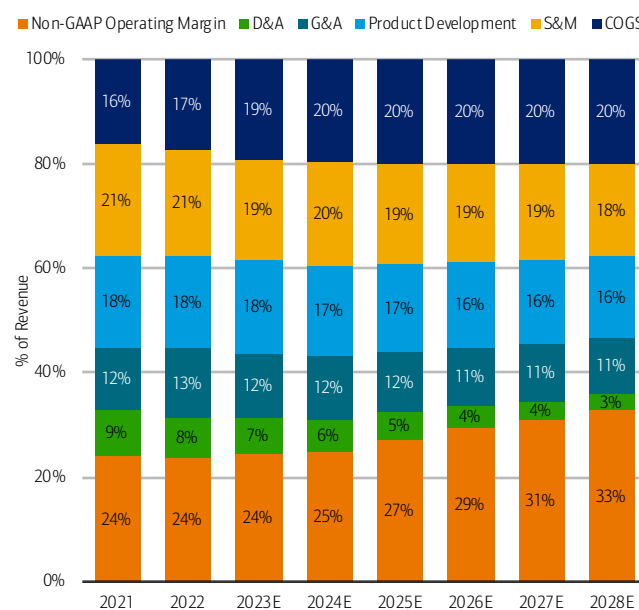


Source: Company Reports, BofA Global Research

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Exhibit 29: Cost Structure and Operating Margin Forecast, 2021 - 2028E

We expect Operating Margin to improve as topline grows due to leverage in the cost model



Source: Company Reports, BofA Global Research

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Management Team

Mark Zagorski, Chief Executive Officer

Mark Zagorski has served as our Chief Executive Officer and as a director since July 2020. Prior to that, Mr. Zagorski served as Chief Executive Officer of Telaria, a NYSE-listed video management platform, from July 2017 to April 2020 and, following Telaria's merger with Rubicon Project, served as President and Chief Operating Officer for Rubicon Project (Nasdaq) through June 2020. Prior to that, Mr. Zagorski was Chief Executive Officer of eXelate, a leading data management and analytics platform, from December 2010 until its acquisition by the Nielsen Company in March 2015, and continued to manage the eXelate business as Executive Vice President of Nielsen Marketing Cloud through June 2017. Mr. Zagorski has over 20 years of digital advertising leadership experience and held previous management positions in companies including MediaSpan, WorldNow and Modem Media. Mr. Zagorski currently serves on the board of Recruitics and CXO Nexus. Mr. Zagorski received a Master of Business Administration from the University of Rochester's Simon School of Business and a Bachelor of Science in Finance from Gannon University, where he also received an Honorary Doctorate of Humane Letters.

Nicola Allais, Chief Financial Officer

Nicola Allais has served as our Chief Financial Officer since November 2017. At DV, Nicola partners with all areas of the business to review, prioritize and fund investment initiatives, and works closely with management and the board to identify and complete M&A opportunities and optimize the company's capital structure. Prior to that, Mr. Allais served as Chief Financial Officer of Penton, an information services company, from 2010 to 2017. Prior to Penton, Mr. Allais served as Chief Financial Officer of Downtown Music and also worked at Primedia, Home Box Office and Ernst and Young. Mr. Allais received a Master of Business Administration from Columbia Business School and a Bachelor of Arts from Princeton University.

Price objective basis & risk

DoubleVerify Holdings, Inc. (DV)

We value DoubleVerify at 37x EV/CY24 EBITDA, similar to the Trade Desk's (TTD) current valuation. TTD is a useful comp because it is the leader within its niche of the digital advertising ecosystem (open web demand side platforms), and because its growth and profitability metrics are similar to DV's.

Downside risks to our PO include: 1) significant worsening of macroeconomic conditions that lead to a decline in ad transaction volume, 2) pricing competition with IAS or potential new entrants, 3) slower than expected adoption of new Activation products.

Analyst Certification

I, Omar Dessouky, CFA, hereby certify that the views expressed in this research report accurately reflect my personal views about the subject securities and issuers. I also certify that no part of my compensation was, is, or will be, directly or indirectly, related to the specific recommendations or view expressed in this research report.

US - Internet Coverage Cluster

Investment rating	Company	BofA Ticker	Bloomberg symbol	Analyst
BUY				
	Alphabet	GOOGL	GOOGL US	Justin Post
	Alphabet	GOOG	GOOG US	Justin Post
	Amazon.com	AMZN	AMZN US	Justin Post
	AppLovin	APP	APP US	Omar Dessouky, CFA
	DoorDash	DASH	DASH US	Michael McGovern
	DoubleVerify Holdings, Inc.	DV	DV US	Omar Dessouky, CFA
	Electronic Arts	EA	EA US	Omar Dessouky, CFA
	Expedia	EXPE	EXPE US	Justin Post
	Integral Ad Science Holding Corp.	IAS	IAS US	Omar Dessouky, CFA
	LegalZoom	LZ	LZ US	Michael McGovern
	Match Group	MTCH	MTCH US	Curtis Nagle, CFA
	Meta Platforms Inc	META	META US	Justin Post
	Pinterest	PINS	PINS US	Justin Post
	RH	RH	RH US	Curtis Nagle, CFA
	Roblox Corp. Class A	RBLX	RBLX US	Omar Dessouky, CFA
	Squarespace, Inc.	SQSP	SQSP US	Michael McGovern
	Uber	UBER	UBER US	Justin Post
	Udemy Inc	UDMY	UDMY US	Curtis Nagle, CFA
	Vivid Seats	SEAT	SEAT US	Curtis Nagle, CFA
	Wayfair	W	W US	Curtis Nagle, CFA
	Wix.com	WIX	WIX US	Michael McGovern
NEUTRAL				
	ACV Auctions	ACVA	ACVA US	Curtis Nagle, CFA
	Airbnb	ABNB	ABNB US	Justin Post
	Beyond Inc	BYON	BYON US	Curtis Nagle, CFA
	Booking Holdings Inc	BKNG	BKNG US	Justin Post
	Bumble	BMBL	BMBL US	Curtis Nagle, CFA
	Digital Turbine, Inc	APPS	APPS US	Omar Dessouky, CFA
	Duolingo	DUOL	DUOL US	Curtis Nagle, CFA
	eBay	EBAY	EBAY US	Justin Post
	Etsy, Inc.	ETSY	ETSY US	Curtis Nagle, CFA
	Instacart	CART	CART US	Justin Post
	Magnite, Inc.	MGNI	MGNI US	Omar Dessouky, CFA
	Playtika	PLTK	PLTK US	Omar Dessouky, CFA
	Snap	SNAP	SNAP US	Justin Post
	Take-Two Interactive	TTWO	TTWO US	Omar Dessouky, CFA
	Zillow	ZG	ZG US	Curtis Nagle, CFA
	Zillow	Z	Z US	Curtis Nagle, CFA
UNDERPERFORM				
	Chewy Inc	CHWY	CHWY US	Curtis Nagle, CFA



US - Internet Coverage Cluster

Investment rating	Company	BofA Ticker	Bloomberg symbol	Analyst
	Lyft, Inc.	LYFT	LYFT US	Michael McGovern
	Opendoor Technologies	OPEN	OPEN US	Curtis Nagle, CFA
	Peloton	PTON	PTON US	Curtis Nagle, CFA
	Redfin Corp	RDFN	RDFN US	Curtis Nagle, CFA
	Shutterstock	SSTK	SSTK US	Curtis Nagle, CFA

IQmethodSM Measures Definitions**Business Performance**

Return On Capital Employed

Return On Equity

Operating Margin

Earnings Growth

Free Cash Flow

Quality of Earnings

Cash Realization Ratio

Asset Replacement Ratio

Tax Rate

Net Debt-To-Equity Ratio

Interest Cover

Valuation Toolkit

Price / Earnings Ratio

Price / Book Value

Dividend Yield

Free Cash Flow Yield

Enterprise Value / Sales

EV / EBITDA

Numerator

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

Net Income

Operating Profit

Expected 5 Year CAGR From Latest Actual

Cash Flow From Operations – Total Capex

Numerator

Cash Flow From Operations

Capex

Tax Charge

Net Debt = Total Debt – Cash & Equivalents

EBIT

Numerator

Current Share Price

Current Share Price

Annualised Declared Cash Dividend

Cash Flow From Operations – Total Capex

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

Other LT Liabilities

Enterprise Value

Denominator

Total Assets – Current Liabilities + ST Debt + Accumulated Goodwill

Amortization

Shareholders' Equity

Sales

N/A

N/A

Denominator

Net Income

Depreciation

Pre-Tax Income

Total Equity

Interest Expense

Denominator

Diluted Earnings Per Share (Basis As Specified)

Shareholders' Equity / Current Basic Shares

Current Share Price

Market Cap = Current Share Price × Current Basic Shares

Sales

Basic EBIT + Depreciation + Amortization

IQmethodSM is the set of BofA Global Research standard measures that serve to maintain global consistency under three broad headings: Business Performance, Quality of Earnings, and validations. The key features of *IQmethod* are: A consistently structured, detailed, and transparent methodology. Guidelines to maximize the effectiveness of the comparative valuation process, and to identify some common pitfalls.

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Important Disclosures

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

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

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

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

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

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

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

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