Alphabet Inc.

Unpacking TPU-As-A-Service

GOOGL is about to embark on a major new initiative to scale AI outside of its datacenter walls via a new economic model, initially with Anthropic, but potentially with others down the road. We think this effort could boost '28 cons. gross profit by 15% and OI by more.

The Key Take-Away: Google is about to kick off one of its largest new business models with the help of several partners, to increase AI capacity industry-wide. Most investors are aware of TPU-aaS given the commentary on the recent earnings call, but the magnitude of how big this effort could be is likely underappreciated by the Street. Semiconductor buysiders have a decent handle on this theme, but we think now is the time for the consumer internet buyside to take notice. TPU-aaS is where Google takes inventory and sells TPUs directly to customers as a merchant vendor. One only has to look at the $811B (up +$479B Q/Q) in purchase commitments buried in the 10-Q this week, the $275B+ increase in backlog in the past 6 months, or AVGO's commitment of 20+ GWs, to start to see how massive this could be. We are raising our Google Cloud revenue and OI estimates significantly with this report, after a full rebuild of our model. We'd also point out that this effort may reverse some future capex growth (potentially downside to our $500B '28 estimate), as this asset-light approach to AI infrastructure helps GOOGL's capital efficiency.

The TPU-aaS effort has implications for many companies across the AI ecosystem including:

- **Anthropic:** gains additional control of its business model, vertically integrates, and is less exposed to restrictions around hyperscaler service agreements.
- **Broadcom:** opens a substantial new revenue pool and diversifies its business to other partners (consistent with our semiconductor research team's companion report on this topic today).
- **Blackstone and others:** allows the companies to scale up their investments into new AI infrastructure and financial vehicles.
- **Fluidstack:** massively increases its footprint as a colo managed service provider (what the industry calls "smart hands", or managed kubernetes) outside of Google's walls. In our view, Fluidstack's recent fundraise may signal its intentions to become a TPU neocloud.

We view this new business model as a win-win across the ecosystem and should allow TPU to become more of an industry standard for AI developers and other AI labs.

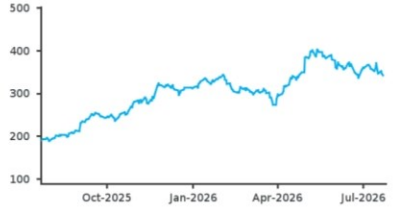
GOOGL	OVERWEIGHT Unchanged
U.S. Internet	POSITIVE Unchanged
Price Target	USD 425.00 Unchanged
Price (23-Jul-26)	USD 317.69
Potential Upside/Downside	+33.8%

Source: Bloomberg, Barclays Research

Market Cap (USD mn)	3889212
Shares Outstanding (mn)	12230.00
Free Float (%)	98.77
52 Wk Avg Daily Volume (mn)	33.9
Dividend Yield (%)	0.28
Return on Equity TTM (%)	49.55
Current BVPS (USD)	50.90

Source: Bloomberg

Price Performance — Exchange-Nasdaq
52 Week range — USD 408.61-187.82



Source: IDC
Link to Barclays Live for interactive charting

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Completed: 24-Jul-26, 00:05 GMT Released: 24-Jul-26, 04:10 GMT Restricted - External

Background On TPU-As-A-Service

Two major announcements have happened in the past quarter that could be material to GOOGL financials over the coming years. The first was on May 18th where Blackstone and Google Cloud set up a JV run by a former Google exec to provide TPU-as-a-service to customers, with the first 0.5 GWs coming online in '27 and more capacity into the future[1]. This was followed up by another mega-deal announcement forming an AI XPV Platform between Broadcom and Blackstone/Apollo, enabling as much as 20 GWs of AI capacity through 2028, with the first >1 GW coming online starting in "mid-2026"[2]. The latter will involve AI labs bringing both TPUs and other custom ASICs (OpenAI's Jalepeno, etc.) online.

For purposes of this report we only really care about the portion that flows through Google's P+L. These two entities could bring online 15-20 GWs of TPU-as-a-service AI cloud capacity outside of what Google is doing inside GCP.

First Off, What Is TPU-As-A-Service (TPU-aaS)?

Historically, the only way an AI lab or enterprise customer could access AI specific compute running on Google's TPUs was via Google Cloud Platform (GCP). Customers would enter into agreements with Google to rent AI capacity on various terms. However, this is starting to change in '26 with the new "off platform" structures noted above. In the very near future, AI labs who are the largest buyers of AI compute (Anthropic, OpenAI, Meta, etc.) will be able to buy compute through a new vehicle that allows for more direct control. Broadcom explained it best in their press release: *"It also establishes a scalable framework for future deployments of XPU-based compute capacity and networking to enable frontier model training and inference at the lowest cost and lowest power, significantly lowering per-token delivery costs."*[3] The XPU cost through this new entity is likely to be comparable to buying the same capacity through the existing cloud providers, but offers more control to the AI labs.

TPU-aaS Entity Structure

Noted above, this new AI XPV Platform was announced in early June by Broadcom, Blackstone, and Apollo. Because we are conducting the analysis from the perspective of impact to GOOGL's shareholders, we are calling it TPU-as-a-service (while Broadcom calls it XPU as it involves non-TPU compute as well, like OpenAI's upcoming Jalepeno chip).

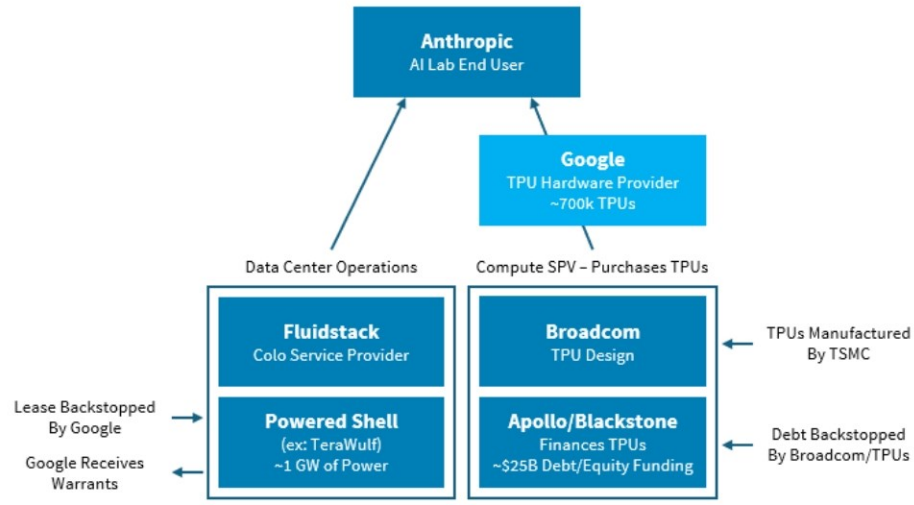
The XPV structure looks a lot like other AI lab compute structures, with a few key layers of the stack. First, Blackstone/Apollo would set up a SPV (special purpose entity) which is financed with equity and debt (collateralized by the compute assets). This SPV would subsequently buy the TPUs from Google, which are co-designed with Broadcom and manufactured by TSMC. These compute assets would go into a datacenter provided by another entity and managed by Fluidstack. Anthropic would then lease the capacity from the SPV at predetermined rates. We have attempted to illustrate this structure below.

[1] https://www.blackstone.com/news/press/blackstone-announces-joint-venture-with-google-to-create-new-tpu-cloud/

[2] https://investors.broadcom.com/news-releases/news-release-details/broadcom-apollo-and-blackstone-establish-landmark-strategic

[3] *https://investors.broadcom.com/news-releases/news-release-details/broadcom-apollo-and-blackstone-establish-landmark-strategic*

FIGURE 1. **A Hypothetical 1 GW TPU-aaS Structure**



Source: Barclays Research Estimates, Company Disclosures

What Is Google's Incentive?

Investors may ask that if there is only a static number of TPUs being produced in any given year, and if Alphabet as a whole is compute constrained, then why wouldn't the company just keep all the TPUs for itself and continue the existing business model of GCP leasing capacity to others? The answer is likely somewhat complex: 1) there are natural limits around how much AI capex GOOGL can deploy on its own, namely capital and to a lesser degree DC power, 2) unlike traditional cloud computing, select large customers of GCP (like Anthropic, Meta, and others) increasingly demand more control and flexibility and are willing to pay Google for that, 3) the TPU-aaS structure is a capital-light way to standardize more of the AI industry and the developer community around your stack, which could have downstream benefits, and 4) selling TPUs insulates Alphabet from the downstream liabilities that may come up from time to time within AI around copyright, security, privacy, and many other issues that have yet to emerge.

What Is Anthropic's Incentive? (Or Other AI Labs?)

Large AI labs have scaled on the back of cloud computing contracts, and while this has been a great "asset-light" way of building their businesses, limitations exist. GCP and AWS provide compute services to Anthropic and others, but that's basically it; the AI lab has zero rights beyond what is laid out in the agreement with the hyperscaler.

For Anthropic, the incentives around controlling its own infrastructure have many benefits to its business model. These include: 1) the company can customize compute more effectively at various layers, and owning compute (via SPV) allows much deeper root access to the TPUs that would not likely be granted within GCP, 2) the company can more easily vertically integrate, and 3) while unlikely to happen, controlling the compute insulates Anthropic's business model from any discrepancies in terms stated in hyperscaler cloud service agreements (i.e., violations of AUPs which can result in termination of said agreement).

Google's Unit Economics

We estimate Google sells each TPU for around $20k per unit to the SPV while likely earning around a 25% gross margin, or around $5k gross profit per unit. Each GW in '26 can host around 700k units, or ~$14B in revenue per GW to Google. Future clusters will have next-generation TPUs (8t, 8i, 9, etc.) whereby revenue per unit and revenue per GW likely moves upward like most compute systems going forward, illustrated below.

FIGURE 2. GOOGL Likely Earning ~25% GM On External TPU-aaS Sales

TPU Economics	2026E	2027E	2028E
Unit Revenue	20,000	33,333	53,333
- Unit Cost	15,000	25,000	40,000
Gross Profit	5,000	8,333	13,333
% Gross Margin	25%	25%	25%
Per GW:			
TPU Revenue ($B)	14.3	18.3	22.0
TPUs per GW	714,286	549,286	411,964

Source: Barclays Research Estimates, Company Disclosures

Broadcom has stated that this new AI XPV initiative amounts to 20 GWs over the next few years. The company has also stated that OpenAI and a few others are designing custom XPUs that would be included in this 20 GWs but separate from Google. We estimate TPU may be as much as 15 GW of the total, illustrated below.

FIGURE 3. Broadcom/Blackstone/Apollo AI XPV Platform GW Breakdown

	2026E	2027E	2028E	Total
TPU GW	1.4	3.2	10.0	**14.6**
Other GW	--	--	--	**5.4**
Total GW				**20**

Source: Barclays Research Estimates, Company Disclosures

Noted above, Google also has a similar JV structure (outside of Broadcom's announced 20 GW) where it invested alongside Blackstone into a new TPU-aaS entity run by former Google infra exec Ben Treynor Sloss that amounts to another 500 MWs in 2027 and "plans to scale significantly" into the future.

Both of these result in a total of 3.7 GWs in '27 and 11.5 GWs in '28 of potential TPU-aaS external sales, illustrated below.

FIGURE 4. **GOOGL Could Have 15+ GWs Online By 2028**

External TPU Sales Framework	2026E	2027E	2028E
Blackstone-Google TPU Cloud JV			
# GW		0.5	1.5
# TPUs		274,643	617,946
Broadcom-Apollo-Blackstone AI XPV Platform			
# GW	1.4	3.2	10.0
# TPUs	1,000,000	1,757,714	4,119,643
Total External TPU GW	**1.4**	**3.7**	**11.5**
# TPUs	1,000,000	2,032,357	4,737,589
GOOGL Revenue ($B)	**20.0**	**67.7**	**252.7**
TPU External ASP	20,000	33,333	53,333
GOOGL Gross Profit ($B)	**5.0**	**16.9**	**63.2**

For illustrative purposes
Source: Barclays Research Estimates, Company Disclosures

Based on the capacity scaling noted above, and using the ASP for the TPUs noted above, we think TPU-as-a-service revenue can reach as much as $250B in 2028, at which point would represent 35%+ upside to current consensus Alphabet revenue and 15% to gross profit.

FIGURE 5. **TPU-aaS Could Represent 15% Potential Upside To Consensus Alphabet GP In '28**

	2025	2026E	2027E	2028E
Current Consensus Estimates:				
Alphabet Total Revenue	402.8	493.0	597.9	711.1
% Y/Y Change	36%	22%	21%	19%
Alphabet Gross Profit	240.3	299.2	361.3	431.9
% Margin	60%	61%	60%	61%
External TPU Contribution:				
External TPU Revenue		20.0	67.7	252.7
% Upside to Total Revenue		4%	11%	36%
External TPU Gross Profit		5.0	16.9	63.2
% Upside to Total Gross Profit		2%	5%	15%

For illustrative purposes
Source: Barclays Research Estimates, Company Disclosures, Bloomberg Consensus as of 7/23/26

This new structure has many benefits to Anthropic's business model (or any other AI lab/TPU customer), noted above, but it also begs the question around just how much more or less a 1 GW TPU-as-a-service cluster may cost in terms of overall capex and annual opex, relative to Anthropic's ability to just rent TPUs directly from GCP. Below we attempt to illustrate a side by side comparison.

FIGURE 6. **Difference In AI Lab Unit Economics For GCP Rental Vs.Owned TPU-aaS**

AI Lab Unit Econ - 1 GW	GCP	TPUaaS
TPUs per GW (m)	0.7	0.7
Training TPUs	0.4	0.4
Inference TPUs	0.4	0.4
Total Capex per GW ($m)	20,000	25,000
TPU Capex per GW ($m)	10,714	14,286
TPU ASP	15,000	20,000
Other Capex per GW ($m)	9,286	10,714
Other Capex per TPU	13,000	15,000
Annual Depreciation Cost per GW ($m)	4,000	5,000
Total Cost per TPU	28,000	35,000
Depreciation/TPU/Year	5,600	7,000
Useful Life (Years)	5	5
AI Lab Inference Revenue per GW ($m)	6,667	6,667
AI Lab Inference Margin	70%	63%
AI Lab Inference Cost per GW	2,000	2,500

2026E
Source: Barclays Research Estimates, Company Disclosures

What's Already Been Announced

Noted above, Broadcom/Blackstone/Apollo's AI XPV initiative spans 20 GWs through 2028. It is not yet clear how big the Blackstone-Google JV TPU project (outside of the AI XPV initiative) is going to be longer term but has already announced 500 MWs in '27. We have identified the first tranches of datacenters coming online to support these efforts from TeraWulf and others, illustrated below.

We estimate Google has around $88B of TPU revenue in the backlog as of 2Q26. This number should ramp up to over $300B cumulative over time, but obviously some revenue starts dropping out of the backlog once TPUs have been sold through.

FIGURE 7. **What's Already Been Announced From Compute DC Providers**

	2Q26	3Q26	4Q26	1Q27	2Q27	3Q27	4Q27
AI Compute Capacity by Shell Provider (MW)	**42**	**457**	**901**	**798**	**924**	**960**	**1,019**
Terawulf	42	168	336	50	50	162	320
Cipher Digital		168	39			50	200
Next Frontier (Coatue)			300		130		
Hut 8					245		
Estimated Undisclosed Capacity	0	121	226	748	499	748	499
Cumulative Compute (MW)	**42**	**499**	**1,400**	**2,198**	**3,122**	**4,081**	**5,100**
Implied TPU Revenue ($B)	**$0.6**	**$6.5**	**$12.9**	**$14.6**	**$16.9**	**$17.6**	**$18.7**
Cumulative TPU Revenue ($B)	**$0.6**	**$7.1**	**$20.0**	**$34.6**	**$51.5**	**$69.1**	**$87.7**
% of 2Q26 Cloud Backlog	0.1%	1.4%	3.9%	6.7%	10.0%	13.4%	17.1%
Cumulative TPU COGS ($B)	**$0.5**	**$5.4**	**$15.0**	**$26.0**	**$38.6**	**$51.8**	**$65.8**
% of 2Q26 Purchase Commitments	0.1%	0.9%	2.5%	4.3%	6.4%	8.5%	10.8%
Inventory Balance	$10.0	$11.4	$14.4	$15.6	$16.8	$17.9	$19.6

Source: Barclays Research Estimates, Company Disclosures

Estimate Changes and Valuation

We have done a complete overhaul of our Google Cloud segment to factor in TPU-aaS revenues and profits. Google's CFO provided some high-level explanation of how TPU-aaS may flow through the company's financial statements last night, and combined with the new inventory line on the BS and the $811B in purchase commitments, we can now piece together what this may look like.

We fully appreciate that our estimates are moving upwards rather dramatically on this revision, but as of now this is our best estimate of how the next three years may play out.

FIGURE 8. Estimate Changes

	3Q26E			2026E			2027E			2028E		
	New	Old Est.	Delta	New	Old Est.	Delta	New	Old Est.	Delta	New	Old Est.	Delta
Google Services												
Search Revenue	64,486.4	64,486.4	0.0%	259,428.9	259,428.9	0.0%	285,371.8	285,371.8	0.0%	308,201.5	308,201.5	0.0%
YouTube Revenue	11,287.1	11,287.1	0.0%	44,860.2	44,860.2	0.0%	49,346.3	49,346.3	0.0%	54,280.9	54,280.9	0.0%
Other - Play/Subscription Revenue	14,800.5	14,800.5	0.0%	55,710.2	55,710.2	0.0%	64,066.7	64,066.7	0.0%	73,676.7	73,676.7	0.0%
Google Network Revenue	7,280.5	7,280.5	0.0%	29,304.2	29,304.2	0.0%	29,011.1	29,011.1	0.0%	28,721.0	28,721.0	0.0%
Total Advertising Revenue	**83,053.9**	**83,053.9**	0.0%	**333,593.3**	**333,593.3**	0.0%	**363,729.1**	**363,729.1**	0.0%	**391,203.4**	**391,203.4**	0.0%
Total Google Services Gross Revenue	**97,854.4**	**97,854.4**	0.0%	**389,303.5**	**389,303.5**	0.0%	**427,795.9**	**427,795.9**	0.0%	**464,880.1**	**464,880.1**	0.0%
Google Services Operating Income	39,644.5	39,644.5	0.0%	164,954.4	164,954.4	0.0%	183,401.2	183,401.2	0.0%	199,296.6	199,296.6	0.0%
Google Cloud												
Google Cloud Revenue	31,469.2	27,282.6	15.3%	117,844.7	101,224.2	16.4%	222,147.1	151,836.3	46.3%	485,610.5	212,570.8	128.4%
Google Cloud Operating Income	10,038.2	9,743.1	3.0%	35,978.9	34,367.6	4.7%	67,486.3	57,153.5	18.1%	144,848.5	84,941.8	70.5%
Other Bets												
Other Bets Revenue	450.0	450.0	0.0%	1,718.0	1,718.0	0.0%	1,925.0	1,925.0	0.0%	1,925.0	1,925.0	0.0%
Other Bets Operating Income	-1,550.0	-1,550.0	0.0%	-6,974.0	-6,974.0	0.0%	-6,075.0	-6,075.0	0.0%	-6,075.0	-6,075.0	0.0%
Consolidated												
Gross Revenue	129,883.6	125,697.0	3.3%	508,902.1	492,281.7	3.4%	651,949.7	581,638.9	12.1%	952,415.6	679,376.0	40.2%
TAC	16,195.2	16,195.2	0.0%	65,586.8	65,586.8	0.0%	69,897.1	69,897.1	0.0%	73,667.8	73,667.8	0.0%
Net Revenue	113,688.4	109,501.8	3.8%	443,315.3	426,694.9	3.9%	582,052.5	511,741.8	13.7%	878,747.9	605,708.2	45.1%
COGS	39,770.9	34,357.5	15.8%	144,688.0	129,665.8	11.6%	213,602.8	163,590.5	30.6%	393,541.6	203,693.9	93.2%
Total Operating Expense (ex. SBC)	73,899.5	68,475.1	7.9%	278,195.6	263,202.4	5.7%	368,771.6	319,459.8	15.4%	574,236.7	385,675.0	48.9%
GAAP EBIT	39,788.9	41,026.7	-3.0%	165,119.7	163,492.5	1.0%	213,281.0	192,281.9	10.9%	304,511.2	220,033.2	38.4%
Consolidated EBITDA (ex SBC)	**56,226.8**	**57,505.8**	**-2.2%**	**228,487.7**	**226,906.4**	**0.7%**	**306,032.9**	**285,428.1**	**7.2%**	**441,290.7**	**357,117.8**	**23.6%**
GAAP EPS	**$2.82**	**$2.90**	**-2.9%**	**$20.20**	**$20.09**	**0.6%**	**$15.40**	**$13.94**	**10.5%**	**$21.88**	**$15.98**	**36.9%**
Proforma EPS	$3.34	$3.42	-2.5%	$22.37	$22.14	1.0%	$17.83	$16.38	8.8%	$24.78	$18.88	31.3%
Total Capex	59,923.9	59,923.5	0.0%	200,490.5	200,493.3	0.0%	350,156.0	350,154.8	0.0%	500,324.2	500,324.4	0.0%

Source: Barclays Research Estimates, Company Reports

We have maintained our $425 price target by rolling back our valuation framework to straight 2027 on an average of 25x EPS and 15x EBITDA (vs. 2027/2028 hybrid previously). This updated framework takes a more near-term view of TPU-aaS impact to GOOGL shares, but we'd note that flipping to straight 2028 would result in a much higher potential valuation, illustrated below. Given all the moving pieces and the heightened capex outlook, we felt it was prudent to use 2027 for now.

FIGURE 9. **GOOGL Valuation**

Google Inc. -- Valuation Worksheet
(in millions except per share amounts)

Current Price	$317.69		
Shares Outstanding	12,309.0		
Current Market Cap	3,910,446.2		
Plus Debt	98,165.0		
Less Cash	242,474.0		
Adj. Enterprise Value	3,766,137.2		
Price to Earnings	**2026E**	**2027E**	**2028E**
GAAP EPS	$20.20	$15.40	$21.88
Current P/E multiple	15.7x	20.6x	14.5x
Adjusted EPS	$22.37	$17.83	$24.78
Current P/E multiple	14.2x	17.8x	12.8x
Target Multiple	**25.0x**	**25.0x**	**25.0x**
Implied Stock Price on fwd. EPS	**$560**	**$450**	**$620**
EV to EBITDA	**2026E**	**2027E**	**2028E**
Adjusted EBITDA	$228,488	$306,033	$441,291
Current EV/EBITDA Multiple	16.5x	12.3x	8.5x
Target Multiple	**15.0x**	**15.0x**	**15.0x**
Enterprise Value	3,427,316	4,590,494	6,619,360
Plus FY End Cash	242,453	233,713	206,541
Less FY End Debt	98,165	98,165	98,165
Equity Value	3,571,604	4,726,042	6,727,736
FY End Projected Sharecount	12282.0	12253.7	12204.8
Implied Stock Price on fwd. EBITDA	**$300**	**$400**	**$550**
Average	**$430**	**$425**	**$585**
Target Price		**$425**	

Source: Barclays Research Estimates, Company Reports. Price as of 4pm EST on 07/23/26

Income Statement

FIGURE 10. GOOGL Income Statement

Google -- Quarterly Income Statement ($ in Millions, except per share amounts)	FY2023A	FY2024A	FY2025A	Mar A 1QA	Jun A 2QA	Sep E 3QE	Dec E 4QE	FY2026E	FY2027E	FY2028E
Consolidated Net Revenue	**256,508**	**295,118**	**342,910**	**94,668**	**103,617**	**113,688**	**131,342**	**443,315**	**582,053**	**878,748**
Gross Revenue	307,394	350,018	402,836	109,896	119,796	129,884	149,327	508,902	651,950	952,416
Google Web Sites Revenue	206,543	234,231	264,899	70,282	74,326	75,773	83,908	304,289	334,718	362,482
Google Network Web Sites Revenue	31,312	30,359	29,792	6,971	7,303	7,280	7,750	29,304	29,011	28,721
TAC	50,886	54,900	59,926	15,228	16,179	16,195	17,985	65,587	69,897	73,668
Other, Cloud, Other Bets Revenue	69,539	85,428	108,145	32,643	38,167	46,830	57,669	175,309	288,221	561,212
Alphabet Net Revenue	256,508	295,118	342,910	94,668	103,617	113,688	131,342	443,315	582,053	878,748
New Segment Revenue (as of 4Q19)										
Google Search & Other	175,033	198,084	224,532	60,399	63,271	64,486	71,272	259,429	285,372	308,201
YouTube Ads	31,510	36,147	40,367	9,883	11,055	11,287	12,635	44,860	49,346	54,281
Subtotal: Google Properties	206,543	234,231	264,899	70,282	74,326	75,773	83,908	304,289	334,718	362,482
Google Network Members Properties	31,312	30,359	29,792	6,971	7,303	7,280	7,750	29,304	29,011	28,721
Google Advertising	237,855	264,590	294,691	77,253	81,629	83,054	91,657	333,593	363,729	391,203
Google Cloud	33,088	43,229	58,705	20,028	24,768	31,469	41,579	117,845	222,147	485,610
Google Other	34,688	40,340	48,030	12,384	12,911	14,801	15,615	55,710	64,067	73,677
Cost of Net Revenues	82,446	91,406	102,609	26,043	29,764	39,771	49,110	144,688	213,603	393,542
Gross Profit	174,062	203,712	240,301	68,625	73,853	73,918	82,232	298,627	368,450	485,206
Operating Expenses:										
Product Development	45,427	49,326	61,087	17,032	18,219	20,450	22,590	78,290	100,700	129,628
Sales and Marketing	27,917	27,808	28,693	7,606	8,403	8,750	9,738	34,496	33,577	30,730
General and Administrative	16,425	14,188	18,025	4,291	4,961	4,929	5,040	19,221	20,892	20,337
Stock Based Compensation	22,460	22,785	24,953	6,751	7,957	7,997	8,670	31,375	37,121	44,170
Other										
Operating Expenses (ex. COGS, Stock Comp)	89,769	91,322	107,805	28,929	31,583	34,129	37,367	132,008	155,169	180,695
Total Operating Expenses	172,215	182,728	213,871	54,972	62,847	73,900	86,477	278,196	368,772	574,237
Income from Operations (GAAP)	84,293	112,390	129,039	39,696	40,770	39,789	44,865	165,120	213,281	304,511
Non -GAAP operating income (ex-SBC)	84,293	112,390	129,039	39,696	42,270	39,789	44,865	165,120	213,281	304,511
Depreciation & Amortization	12,448	15,827	21,652	6,611	7,233	8,441	9,708	31,993	55,631	92,610
EBITDA (inc SBC)	96,741	128,217	150,691	46,307	48,003	48,230	54,573	197,113	268,912	397,121
Net Income Continuing Operations (GAAP)	73,795	100,118	132,170	62,578	112,193	34,645	38,892	248,308	188,738	267,057
Net Income (GAAP)	73,795	100,118	132,170	62,578	112,107	34,645	38,892	248,222	188,738	267,057
EPS (GAAP)	$5.81	$8.05	$10.81	$5.11	$9.11	$2.82	$3.17	$20.20	$15.40	$21.88
Diluted Shares Outstanding	12,721	12,447	12,230	12,238	12,309	12,297	12,284	12,282	12,254	12,205
Adjusted Net Income	95,965	118,346	152,132	67,979	119,973	41,043	45,828	273,408	218,435	302,393
Adjusted EPS	**$7.55**	**$9.62**	**$12.84**	**$5.55**	**$9.75**	**$3.34**	**$3.73**	**$22.37**	**$17.83**	**$24.78**
Adjusted EBITDA (ex SBC)	119,201	151,002	175,644	53,058	55,960	56,227	63,243	228,488	306,033	441,291
Adjusted Income from Operations	106,753	135,175	153,992	46,447	48,727	47,786	53,535	196,494	250,402	348,681
Free Cash Metrics										
Free Cash Flow	68,615	72,764	73,266	10,116	(5,855)	2,249	4,074	10,584	(59,249)	(78,467)
FCF per share	**$5.39**	**$5.85**	**$5.99**	**$0.83**	**-$0.48**	**$0.18**	**$0.33**	**$0.86**	**-$4.84**	**-$6.43**
Margin Analysis										
Gross Margin	56.6%	58.2%	59.7%	62.4%	61.6%	56.9%	55.1%	58.7%	56.5%	50.9%
Sales and Marketing as % of Net Revenue	10.9%	9.4%	8.4%	8.0%	8.1%	7.7%	7.4%	7.8%	5.8%	3.5%
Product Development as % of Net Revenue	17.7%	16.7%	17.8%	18.0%	17.6%	18.0%	17.2%	17.7%	17.3%	14.8%
General and Administrative as % of Net Revenue	6.4%	4.8%	5.3%	4.5%	4.8%	4.3%	3.8%	4.3%	3.6%	2.3%
Operating Margin (GAAP)	27.4%	32.1%	32.0%	36.1%	34.0%	30.6%	30.0%	32.4%	32.7%	32.0%
Operating Margin (% of Net Revenue)	32.9%	38.1%	37.6%	41.9%	39.3%	35.0%	34.2%	37.2%	36.6%	34.7%
Operating Margin (Non GAAP)	32.9%	38.1%	37.6%	41.9%	40.8%	35.0%	34.2%	37.2%	36.6%	34.7%
EBITDA Margin	37.7%	43.4%	43.9%	48.9%	46.3%	42.4%	41.6%	44.5%	46.2%	45.2%
Net Income (GAAP)	28.8%	33.9%	38.5%	66.1%	108.3%	30.5%	29.6%	56.0%	32.4%	30.4%
Adjusted Net Income	37.4%	40.1%	44.4%	71.8%	115.8%	36.1%	34.9%	61.7%	37.5%	34.4%
Adjusted EBITDA Margin	46.5%	51.2%	51.2%	56.0%	54.0%	49.5%	48.2%	51.5%	52.6%	50.2%
Effective Tax Rate	13.9%	16.4%	17.0%	19.2%	19.1%	16.0%	16.0%	18.2%	15.0%	15.0%
Pretax Income	33.4%	40.6%	46.3%	81.8%	133.9%	36.3%	35.3%	68.5%	38.1%	35.8%

Source: Barclays Research Estimates, Company Reports



GOOGL: Quarterly and Annual EPS (USD)

	2025	2026			2027			Change y/y	
FY Dec	Actual	Old	New	Cons	Old	New	Cons	2026	2027
Q1	3.17A	5.55A	5.55A	5.11A	3.70E	4.14E	3.66E	75%	-25%
Q2	2.82A	9.62A	9.75A	9.11A	4.08E	4.32E	3.85E	246%	-56%
Q3	3.57A	3.42E	3.34E	3.25E	4.13E	4.43E	3.97E	-6%	33%
Q4	3.28A	3.54E	3.73E	3.53E	4.47E	4.94E	4.41E	14%	32%
Year	12.84A	22.14E	22.37E	15.05E	16.38E	17.83E	15.63E	74%	-20%
P/E	24.7		14.2			17.8			

Consensus numbers are from Bloomberg received on 23-Jul-2026; 12:50 GMT
Source: Barclays Research

U.S. Internet | POSITIVE

Alphabet Inc. (GOOGL) | OVERWEIGHT

Income statement ($mn)	2025A	2026E	2027E	2028E	CAGR
Revenue	342,910	443,315	582,053	878,748	36.8%
Gross profit	240,301	298,627	368,450	485,206	26.4%
EBITDA (adj)	175,644	228,488	306,033	441,291	35.9%
EBIT (adj)	129,039	165,120	213,281	304,511	33.1%
Pre-tax income (adj)	183,779	335,084	259,166	358,354	24.9%
Net income (adj)	152,132	273,408	218,435	302,393	25.7%
EPS (adj) ($)	12.84	22.37	17.83	24.78	24.5%
Diluted shares (mn)	12,230.0	12,282.0	12,253.7	12,204.8	-0.1%
DPS ($)	0.00	0.00	0.00	0.00	N/A

Margin and return data	2025A	2026E	2027E	2028E	Average
EBITDA (adj) margin (%)	51.2	51.5	52.6	50.2	51.4
EBIT (adj) margin (%)	37.6	37.2	36.6	34.7	36.5
Pre-tax (adj) margin (%)	53.6	75.6	44.5	40.8	53.6
Net (adj) margin (%)	44.4	61.7	37.5	34.4	44.5
ROIC (%)	26.9	21.0	18.7	20.0	21.6
ROE (%)	35.7	43.4	21.7	22.3	30.8

Balance sheet and cash flow ($mn)	2025A	2026E	2027E	2028E	CAGR
Tangible fixed assets	246,597	423,213	718,255	1,126,485	65.9%
Intangible fixed assets	1,283	9,105	9,105	9,105	92.2%
Cash and equivalents	29,009	55,890	47,150	19,978	-11.7%
Total assets	595,281	1,027,502	1,337,758	1,759,588	43.5%
Short and long-term debt	46,547	98,165	98,165	98,165	28.2%
Other long-term liabilities	19,472	44,200	44,200	44,200	31.4%
Total liabilities	180,016	299,001	324,236	375,639	27.8%
Shareholders' equity	415,265	728,501	1,013,522	1,383,949	49.4%
Net debt/(funds)	17,538	42,275	51,015	78,187	64.6%
Change in working capital	618	586	1,069	9,673	150.1%
Cash flow from operations	164,713	211,074	290,908	421,857	36.8%
Capital expenditure	-91,447	-200,490	-350,156	-500,324	N/A
Free cash flow	73,266	10,584	-59,249	-78,467	N/A

Valuation and leverage metrics	2025A	2026E	2027E	2028E	Average
P/E (adj) (x)	24.7	14.2	17.8	12.8	17.4
EV/sales (x)	11.5	8.9	6.8	4.5	7.9
EV/EBITDA (adj) (x)	22.4	17.3	12.9	9.0	15.4
FCF yield (%)	1.9	0.3	-1.5	-2.0	-0.3
Dividend yield (%)	0.0	0.0	0.0	0.0	0.0
Net debt/EBITDA (adj) (x)	0.1	0.2	0.2	0.2	0.2

Selected operating metrics ($mn)	2025A	2026E	2027E	2028E
Google sites net revenue	264,899	304,289	334,718	362,482
Network sites net revenue	29,792	29,304	29,011	28,721
.				
Traffic acquisition cost	59,926	65,587	69,897	73,668

Note: FY End Dec
Source: Company data, Bloomberg, Barclays Research

Price (23-Jul-2026) **USD 317.69**
Price Target **USD 425.00**

Why OVERWEIGHT?

Google continues to grow revenue and EPS at a ~20% CAGR on a normalized basis. The company continues to innovate its product, and its machine learning capabilities should help advertisers get higher ROI, causing them to continue to allocate their advertising budgets to Google.

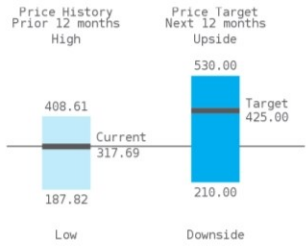
Upside case **USD 530.00**

We expect Google to continue to take share from other channels in mobile advertising, and 50% of every incremental dollar going forward. Reduction of losses in "Other Bets" could be a source of upside to estimates.

Downside case **USD 210.00**

Google is migrating toward lower-margin businesses and, having benefited from the substantial improvement in mobile monetization, the growth rate may decelerate going forward.

Upside/Downside scenarios



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Primary Stocks (Ticker, Date, Price)
Alphabet Inc. (GOOGL, 23-Jul-2026, USD 317.69), Overweight/Positive, A/CD/CE/D/E/J/K/L/M/N

Materially Mentioned Stocks (Ticker, Date, Price)
Broadcom Inc. (AVGO, 23-Jul-2026, USD 392.47), Overweight/Neutral, CD/CE/D/J/K/L/M/N

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Overweight - The stock is expected to outperform the unweighted expected total return of the industry coverage universe over a 12-month investment horizon.

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U.S. Internet

Airbnb Inc. (ABNB)	Alphabet Inc. (GOOGL)	Amazon.com, Inc. (AMZN)
Booking Holdings Inc. (BKNG)	Chewy, Inc. (CHWY)	DoorDash, Inc. (DASH)
Duolingo, Inc. (DUOL)	eBay, Inc. (EBAY)	Ethos Technologies Inc. (LIFE)
Etsy Inc (ETSY)	Expedia Inc. (EXPE)	Liftoff Mobile, Inc. (LFTO)
Lyft, Inc. (LYFT)	Maplebear, Inc. (CART)	Match Group, Inc. (MTCH)
Meta Platforms, Inc. (META)	Pinterest, Inc. (PINS)	Roblox Corporation (RBLX)
Shopify (SHOP)	Snap, Inc (SNAP)	Tripadvisor Inc. (TRIP)

Uber Technologies Inc. (UBER)

U.S. Semiconductors & Semiconductor Capital Equipment

Advanced Micro Devices (AMD)	Allegro Microsystems (ALGM)	Analog Devices (ADI)
Applied Materials Inc. (AMAT)	Arm Holdings plc (ARM)	Astera Labs, Inc. (ALAB)
Broadcom Inc. (AVGO)	Camtek (CAMT)	Cerebras Systems Inc. (CBRS)
Cirrus Logic Inc. (CRUS)	Coherent Corp. (COHR)	Credo Technology Group (CRDO)
Intel Corp. (INTC)	KLA Corporation (KLAC)	Lam Research Corporation (LRCX)
Lumentum Holdings Inc. (LITE)	MACOM Technology Solutions Holdings, Inc. (MTSI)	Marvell Technology Group, Ltd. (MRVL)
Microchip Technology (MCHP)	Micron Technology, Inc. (MU)	Nova Limited (NVMI)
NVIDIA Corp. (NVDA)	NXP Semiconductors NV (NXPI)	ON Semiconductor (ON)
Penguin Solutions (PENG)	Qorvo Inc. (QRVO)	QUALCOMM, Inc. (QCOM)
Sandisk Corporation (SNDK)	Seagate Technology plc (STX)	Silicon Laboratories, Inc. (SLAB)
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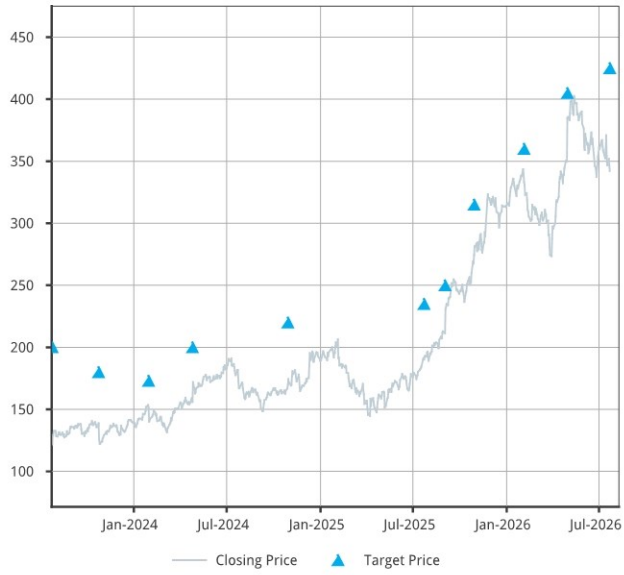
Alphabet Inc. (GOOGL / GOOGL)

Stock Rating: **OVERWEIGHT**

Industry View: **POSITIVE**

Closing Price: **USD 317.69** (23-Jul-2026)

Rating and Price Target Chart (as of 23-Jul-2026)



Source: LSEG Data & Analytics, Bloomberg, Barclays Research

Link to Barclays Live for interactive charting

Publication Date	Closing Price*	Rating	Adjusted Price Target	Currency
22-Jul-2026	342.09		425.00	USD
30-Apr-2026	349.94		405.00	USD
04-Feb-2026	333.04		360.00	USD
29-Oct-2025	274.57		315.00	USD
02-Sep-2025	212.91		250.00	USD
23-Jul-2025	190.23		235.00	USD
29-Oct-2024	169.68		220.00	USD
25-Apr-2024	156.00		200.00	USD
30-Jan-2024	151.46		173.00	USD
24-Oct-2023	138.81		180.00	USD
25-Jul-2023	122.21		200.00	USD

On 23-Jul-2023, prior to any intra-day change that may have been published, the rating for this security was Overweight, and the adjusted price target was 160.00 USD.

Source: Bloomberg, Barclays Research

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Valuation Methodology: Our $425 price target is based on an average of 25x EPS and 15x EBITDA multiples on our FY27E estimates.

Risks which May Impede the Achievement of the Barclays Research Valuation and Price Target: Increasing competition and regulatory issues could cause multiple compression and downward estimate revisions, while continued innovation, successful product launches and an uptick in GCP adoption could cause upside to our current estimates.

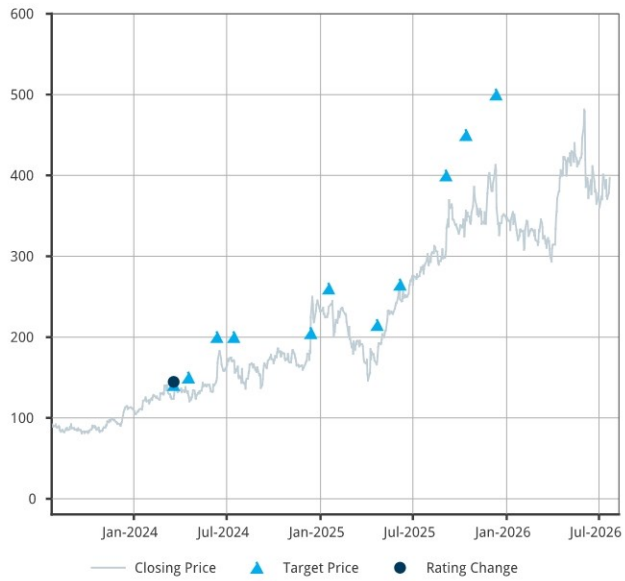
Broadcom Inc. (AVGO / AVGO)

Stock Rating: **OVERWEIGHT**

Industry View: **NEUTRAL**

Closing Price: **USD 392.47** (23-Jul-2026)

Rating and Price Target Chart (as of 23-Jul-2026)



Source: LSEG Data & Analytics, Bloomberg, Barclays Research

Link to Barclays Live for interactive charting

Publication Date	Closing Price*	Rating	Adjusted Price Target	Currency
11-Dec-2025	406.37		500.00	USD
13-Oct-2025	356.70		450.00	USD
04-Sep-2025	306.10		400.00	USD
06-Jun-2025	256.85		265.00	USD
22-Apr-2025	166.21		215.00	USD
17-Jan-2025	229.41		260.00	USD
13-Dec-2024	180.66		205.00	USD
15-Jul-2024	1700.67		200.00	USD
12-Jun-2024	146.10		200.00	USD
17-Apr-2024	128.26		150.00	USD
19-Mar-2024	123.80	Overweight	140.50	USD

On 23-Jul-2023, prior to any intra-day change that may have been published, the rating and price target for this security were suspended.

Source: Bloomberg, Barclays Research

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Valuation Methodology: Our price target of $500 is based on 22x our CY27E EPS of $22.55.

Risks which May Impede the Achievement of the Barclays Research Valuation and Price Target: Slowdown of AI spend. Slowdown of enterprise spend. Share loss in wireless.

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