

Alphabet

Search Wars – Feb data shows marginal m/m improvement in Google' share

Maintain Rating: BUY | PO: 173.00 USD | Price: 132.67 USD

Search share: Google up 15bps m/m but down 175bps y/y

Statcounter February data indicates Google's global search market share improved 15bps m/m (down 175bps y/y) to 91.6% while Bing share declined 11bps m/m (up 50bps y/y) to 3.3% and Others (which includes Yandex, Baidu, Naver, DuckDuckGo, and other smaller search engines but not ChatGPT) was down 2bps m/m (up 130bps y/y) to 4.0%. On mobile, Google's market share was down 134bps y/y to 95.4% vs Bing's up 5bps y/y and Others up 135bps y/y. On desktop, Google's market share was down 334bps y/y to 82.3% vs Bing's up 199bps y/y & Others up 124bps. Top share gainer in Other category was Yandex (up 100bps y/y), a by traction within Russia.

ChatGPT traffic grows, but still small fraction of Google

Similarweb data suggests ChatGPT, Bing and Gemini (Bard rebranded) web traffic saw m/m increase while Google was flat. As of 2/29, on a 7-day moving average, web visits to ChatGPT were up 11% m/m to 58mn, Bing were up 1% m/m to 44mn, Gemini were up 40% m/m to 15mn while Google was flat y/y to 2.8bn. For downloads, per Sensor Tower, all three major platforms saw m/m decline in downloads, Google app downloads were down 16% m/m to 11mn, Bing was down 57% to 5mn and ChatGPT was down 15% to 18mn. Google to Bing download ratio was 2.3x globally and 7.5x in US while compared to ChatGPT, Google had lower downloads (0.6x globally) and 0.8x in the US.

AI sentiment top stock driver & risk

Overall, we do not see a major traffic impact for Google and continue to see 1Q search upside potential given peer outlooks. In 2024, we see three important drivers of AI-driven search growth, including 1) increasing number of queries as LLM integration improves search capabilities, 2) more effective targeting & higher monetization for Google Search, and 3) growing advertiser adoption of AI automated tools, such as PMax. Following earnings, Google I/O could be a potential catalyst to reduce the AI overhang. Top risks are devaluation of search as users can find AI-generated information on other sites & and slower AI progress (or more setbacks) than peers weighing on AI sentiment. Maintain Buy on Alphabet.

Estimates (Dec) (US\$)	2022A	2023A	2024E	2025E	2026E
EPS	5.78	7.48	8.51	9.67	10.84
GAAP EPS	4.56	5.80	6.78	7.70	8.65
EPS Change (YoY)	-11.9%	29.4%	13.8%	13.6%	12.1%
Consensus EPS (Bloomberg)			7.07	8.09	9.04
DPS	0	0	0	0	0
EPS (GOOG - US\$)	5.78	7.48	8.51	9.67	10.84
DPS (GOOG - US\$)	0	0	0	0	0
Valuation (Dec)					
P/E	23.0x	17.7x	15.6x	13.7x	12.2x
GAAP P/E	29.1x	22.9x	19.6x	17.2x	15.3x
EV / EBITDA*	15.2x	13.5x	11.8x	10.4x	9.3x
Free Cash Flow Yield*	3.6%	4.2%	4.9%	6.0%	6.8%

* For full definitions of *IQmethod*SM measures, see page 9.

06 March 2024

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Stock Data

Price (NAS / NAS)	132.67 USD / 133.78 USD
Price Objective	173.00 USD / 173.00 USD
Date Established	31-Jan-2024 / 31-Jan-2024
Investment Opinion	B-1-9 / B-1-9
52-Week Range	89.42 USD - 153.78 USD
Market Value (mn)	1,656,763 USD
Free Float	99.6%
Average Daily Value	4444.53 USD
Shares Outstanding (mn)	12,487.9 / 12,487.9
BofA Ticker / Exchange	GOOGL / NAS
BofA Ticker / Exchange	GOOG / NAS
Bloomberg / Reuters	GOOGL US / GOOGLQQ
ROE (2024E)	35.2%
Net Dbt to Eqty (Dec-2023A)	1.2%

ESGMeter™ High

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

AI: Artificial Intelligence
ML: Machine Learning
PMAX: Performance Max
LLM: Large Language Model

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Timestamp: 06 March 2024 06:00AM EST

iQprofileSM Alphabet

iQmethodSM – Bus Performance*

(US\$ Millions)	2022A	2023A	2024E	2025E	2026E
Return on Capital Employed	26.8%	31.0%	31.4%	31.8%	32.1%
Return on Equity	29.1%	35.1%	35.2%	35.4%	35.4%
Operating Margin	40.3%	42.8%	43.0%	42.7%	42.6%
Free Cash Flow	60,010	69,495	80,385	98,704	113,346

iQmethodSM – Quality of Earnings*

(US\$ Millions)	2022A	2023A	2024E	2025E	2026E
Cash Realization Ratio	1.2x	1.1x	1.2x	1.2x	1.3x
Asset Replacement Ratio	2.0x	2.4x	2.5x	2.0x	1.8x
Tax Rate	15.9%	13.9%	17.0%	17.0%	17.0%
Net Debt-to-Equity Ratio	3.0%	1.2%	1.6%	-0.8%	-4.3%
Interest Cover	26.8x	NA	NA	NA	NA

Income Statement Data (Dec)

(US\$ Millions)	2022A	2023A	2024E	2025E	2026E
Sales	233,881	256,508	289,092	321,615	354,475
% Change	10.3%	9.7%	12.7%	11.2%	10.2%
Gross Profit	156,633	174,062	194,128	212,692	232,119
% Change	6.8%	11.1%	11.5%	9.6%	9.1%
EBITDA	109,931	123,594	141,908	160,092	178,875
% Change	3.4%	12.4%	14.8%	12.8%	11.7%
Net Interest & Other Income	(22,876)	(24,178)	(22,997)	(25,187)	(27,227)
Net Income (Adjusted)	76,051	95,112	105,635	116,828	128,776
% Change	-14.5%	25.1%	11.1%	10.6%	10.2%

Free Cash Flow Data (Dec)

(US\$ Millions)	2022A	2023A	2024E	2025E	2026E
Net Income from Cont Operations (GAAP)	59,972	73,795	84,101	92,977	102,774
Depreciation & Amortization	15,727	13,699	17,584	22,884	27,824
Change in Working Capital	(2,235)	(3,845)	(2,769)	237	(37)
Deferred Taxation Charge	NA	NA	NA	NA	NA
Other Adjustments, Net	18,031	18,097	26,072	29,092	31,912
Capital Expenditure	(31,485)	(32,251)	(44,603)	(46,486)	(49,128)
Free Cash Flow	60,010	69,495	80,385	98,704	113,346
% Change	-10.6%	15.8%	15.7%	22.8%	14.8%
Share / Issue Repurchase	43,572	953	(5,852)	(7,452)	(9,052)
Cost of Dividends Paid	0	0	0	0	0
Change in Debt	(54,068)	(11,550)	(8,916)	(10,116)	(11,316)

Balance Sheet Data (Dec)

(US\$ Millions)	2022A	2023A	2024E	2025E	2026E
Cash & Equivalents	21,879	24,048	22,161	29,793	43,267
Trade Receivables	40,258	47,964	55,346	59,487	65,324
Other Current Assets	102,658	99,518	101,575	103,297	104,899
Property, Plant & Equipment	112,668	134,345	161,391	185,052	206,447
Other Non-Current Assets	87,801	98,350	99,150	99,950	100,750
Total Assets	365,264	404,225	439,623	477,580	520,686
Short-Term Debt	0	0	0	0	0
Other Current Liabilities	69,300	81,814	88,483	94,584	101,986
Long-Term Debt	29,449	27,329	27,129	26,929	26,729
Other Non-Current Liabilities	10,371	9,870	9,870	9,870	9,870
Total Liabilities	109,120	119,013	125,482	131,383	138,585
Total Equity	256,144	285,212	314,140	346,197	382,102
Total Equity & Liabilities	365,264	404,225	439,623	477,580	520,686

* For full definitions of iQmethodSM measures, see page 9.

Company Sector

Internet/e-Commerce

Company Description

Alphabet is a global technology company focused around key areas, such as search, advertising, operating systems and platforms, enterprise and hardware products. The company generates revenue primarily by delivering online advertising and by selling apps and contents on Google Play as well as hardware products. The company provides its products and services in more than 100 languages and in 190 countries, regions, and territories.

Investment Rationale

We see Alphabet as well positioned long term with leading AI technology to apply to search, YouTube and Cloud businesses. Alphabet should also benefit from increasing mobile usage, video usage, Google Play activity, and connected device activity (including autos). We believe that Alphabet should trade at a premium to a media peer group given technology leadership, high margins, and strong cash flow generation for buybacks.

Stock Data

Average Daily Volume	33,500,606
Shares / Common - Dual Listed	1.00

Quarterly Earnings Estimates

	2023	2024
Q1	1.71A	1.90E
Q2	1.82A	2.11E
Q3	1.92A	2.13E
Q4	2.03A	2.38E

Data update

Google's search share up m/m, traffic was flat, and downloads declined in Feb

Per Statcounter, in Feb, Google global search market share was up 15bps m/m vs. Bing down 11bps m/m. On a y/y basis, Google's market share was down 175bps y/y (vs down 143bps y/y in Jan) to 91.6% while Bing gained 50bps share y/y (vs up 39bps in Jan).

- On **Mobile**, Google gained 5bps of search market share globally vs. Bing down 1bps m/m. On a y/y basis, Google's market share was down 134bps y/y (vs down 114 bps in Jan) to 95.4 %. Bing's mobile search market share increased 5bps y/y (vs up 4bps in Jan) to 0.5%.
- On **Desktop**, Google market share increased 35bps m/m vs. Bing down 33bps. On a y/y basis, Google's market share was down 334bps y/y (vs down 274bps in Jan) to 82.3% while Bing's desktop search market share increased 199bps y/y (vs up 165bps in Jan) to 10.2%.

For **Web traffic**, Similarweb data suggests ChatGPT, Bing and Gemini (Bard rebranded) saw m/m increase while Google was flat. As of 2/29, on a 7-day moving average, web visits to ChatGPT were up 11% m/m to 58mn, Bing were up 1% m/m to 44mn, Gemini were up 40% m/m to 15mn while Google was flat y/y to 2.8bn.

For **downloads**, Bing and ChatGPT global downloads remain volatile and in February were down 57% m/m and 15% m/m, respectively, while Google downloads declined 16% m/m. In US, Google downloads declined 15% m/m, while Bing downloads were down 44% m/m and ChatGPT were down 8% m/m. In Feb, Google to Bing download ratio was 2.3x globally and 7.5x in US. Compared to ChatGPT, Google had lower downloads globally (0.6x) and in the US (0.8x).

Statcounter Market share data

Total Search Share (Desktop, Mobile, Tablet & Console)

Per Statcounter, in Feb, Google global search market share was up 15bps m/m vs. Bing down 11bps m/m. On a y/y basis, Google's market share was down 175bps y/y (vs down 143bps in Jan) to 91.6% while Bing's gained 50bps y/y (vs up 39bps in Jan) to 3.3%, and Others gained 130bps y/y to 4.0%. Top share gainer in Other category was Yandex (up 126bps y/y), driven by search engine's growing popularity in Russia.

Exhibit 1: Global Search Engine Market Share

In Feb, Google's global search market share declined 175bps y/y to 91.6%.

All Search	Jul-22	Aug-22	Sep-22	Oct-22	Nov-22	Dec-22	Jan-23	Feb-23	Mar-23	Apr-23	May-23	Jun-23	Jul-23	Aug-23	Sep-23	Oct-23	Nov-23	Dec-23	Jan-24	Feb-24
Google	91.5%	92.0%	92.4%	92.3%	92.2%	92.6%	92.9%	93.4%	93.2%	92.8%	93.1%	92.6%	92.1%	91.9%	91.6%	91.6%	91.5%	91.6%	91.5%	91.6%
Bing	3.3%	3.3%	3.5%	3.6%	3.4%	3.0%	3.0%	2.8%	2.9%	2.8%	2.8%	2.8%	3.0%	3.0%	3.0%	3.1%	3.2%	3.4%	3.4%	3.3%
Yahoo	1.3%	1.3%	1.3%	1.3%	1.2%	1.2%	1.2%	1.1%	1.1%	1.1%	1.1%	1.1%	1.2%	1.2%	1.2%	1.2%	1.2%	1.1%	1.1%	1.1%
Other	3.9%	3.3%	2.8%	2.8%	3.2%	3.2%	2.9%	2.7%	2.8%	3.3%	3.0%	3.5%	3.8%	4.0%	4.2%	4.1%	4.0%	3.9%	4.0%	4.0%
Y/Y (bps)																				
Google	(38)	(3)	38	68	79	64	100	137	165	73	63	78	61	(15)	(84)	(78)	(67)	(96)	(143)	(175)
Bing	96	86	79	85	28	17	15	(16)	(24)	(26)	(31)	(43)	(30)	(31)	(44)	(49)	(22)	34	39	50
Yahoo	(13)	(16)	(16)	(19)	(30)	(26)	(30)	(38)	(34)	(28)	(19)	(23)	(17)	(17)	(8)	(11)	(1)	(12)	(11)	(5)
Other	(42)	(70)	(102)	(134)	(76)	(53)	(84)	(83)	(106)	(20)	(14)	(11)	(15)	66	138	135	89	73	115	130
M/M (bps)																				
Google	(40)	54	42	(8)	(13)	37	32	47	(16)	(39)	29	(47)	(57)	(22)	(27)	(2)	(2)	8	(15)	15
Bing	9	5	11	14	(17)	(39)	0	(22)	5	(10)	1	0	22	4	(2)	9	10	17	5	(11)
Yahoo	2	0	(2)	(1)	(8)	1	(3)	(8)	0	(2)	0	(2)	8	0	7	(4)	2	(10)	(2)	(2)
Other	32	(63)	(51)	(2)	38	1	(30)	(17)	12	49	(31)	51	28	18	21	(5)	(8)	(15)	12	(2)

Source: Statcounter, BofA Global Research

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Mobile search share

Per Statcounter, in Feb, Google mobile search market share increased 5bps m/m vs. Bing down 1bps m/m. On a y/y basis, Google's market share was down 134bps y/y (vs down 114bps in Jan) to 95.4% while Bing's mobile search market share was up 5bps y/y (vs up 4bps in Jan) to 0.5%, and Others was up 135bps y/y to 3.6%. Top share gainers in Others category was Yandex (up 90bps y/y) & Baidu (up 42bps y/y).

Exhibit 2: Global Mobile Search Engine Market Share

In Feb, Google's mobile search market share declined 134bps y/y to 95.4%.

Mobile	Jul-22	Aug-22	Sep-22	Oct-22	Nov-22	Dec-22	Jan-23	Feb-23	Mar-23	Apr-23	May-23	Jun-23	Jul-23	Aug-23	Sep-23	Oct-23	Nov-23	Dec-23	Jan-24	Feb-24
Google	95.0%	95.6%	96.3%	96.4%	96.1%	96.2%	96.5%	96.7%	96.6%	95.9%	96.1%	95.9%	95.4%	95.2%	94.9%	94.9%	95.2%	95.5%	95.3%	95.4%
bing	0.6%	0.6%	0.5%	0.6%	0.6%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%
Yahoo!	0.8%	0.8%	0.8%	0.7%	0.7%	0.7%	0.6%	0.6%	0.6%	0.6%	0.6%	0.5%	0.6%	0.6%	0.6%	0.6%	0.5%	0.5%	0.5%	0.5%
Other	3.7%	3.0%	2.4%	2.3%	2.8%	2.7%	2.5%	2.3%	2.4%	3.0%	2.8%	3.1%	3.5%	3.7%	3.9%	4.0%	3.8%	3.5%	3.7%	3.6%
Y/Y (bps)																				
Google	45	74	148	197	157	129	149	149	179	49	21	60	44	(40)	(133)	(147)	(89)	(69)	(114)	(134)
bing	10	8	4	9	(1)	(9)	(8)	(10)	(12)	(2)	1	(5)	(6)	(9)	(3)	(4)	(3)	4	4	5
Yahoo!	(7)	(5)	(8)	(10)	(18)	(19)	(24)	(31)	(27)	(20)	(16)	(20)	(19)	(21)	(14)	(14)	(14)	(19)	(16)	(7)
Other	(45)	(76)	(143)	(195)	(136)	(102)	(116)	(106)	(137)	(24)	(7)	(34)	(19)	69	150	165	102	85	124	135
M/M (bps)																				
Google	(34)	66	65	13	(34)	11	29	25	(8)	(71)	20	(22)	(50)	(18)	(28)	(1)	24	31	(16)	5
bing	6	0	(5)	3	(2)	(5)	(2)	(2)	(1)	6	0	(3)	5	(3)	1	2	(1)	2	(2)	(1)
Yahoo!	4	1	(3)	(1)	(7)	0	(4)	(8)	1	3	(1)	(5)	5	(1)	4	(1)	(7)	(5)	(1)	1
Other	26	(68)	(58)	(13)	45	(9)	(21)	(16)	9	62	(21)	30	41	20	23	2	(18)	(26)	18	(5)

Source: Statcounter, BofA Global Research

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Desktop search share

Per Statcounter, in Feb, Google desktop search market share increased 35bps m/m vs. Bing down 33bps m/m. On a y/y basis, Google's market share declined 334bps y/y (vs down 274bps y/y in Jan) to 82.3%, while Bing's market share increased 199bps y/y (vs up 165bps in Jan) to 10.2% and Others was up 124bps to 4.9%. Major share gainer in Others category was Yandex (up 126bps y/y).

Exhibit 3: Global Desktop Search Engine Market Share

In Feb, Google's desktop search market share declined 334bps y/y to 82.3%.

Desktop	Jul-22	Aug-22	Sep-22	Oct-22	Nov-22	Dec-22	Jan-23	Feb-23	Mar-23	Apr-23	May-23	Jun-23	Jul-23	Aug-23	Sep-23	Oct-23	Nov-23	Dec-23	Jan-24	Feb-24
Google	84.2%	84.8%	84.8%	83.7%	83.8%	84.1%	84.7%	85.6%	85.5%	86.8%	87.7%	83.9%	83.5%	83.5%	83.8%	83.5%	82.8%	81.7%	82.0%	82.3%
bing	8.8%	8.8%	9.2%	9.9%	9.6%	9.0%	8.9%	8.2%	8.2%	7.1%	6.8%	8.7%	9.2%	9.1%	8.7%	9.1%	9.6%	10.5%	10.5%	10.2%
Yahoo!	2.5%	2.5%	2.5%	2.6%	2.5%	2.6%	2.6%	2.5%	2.4%	2.1%	2.1%	2.6%	2.7%	2.7%	2.7%	2.7%	2.9%	2.8%	2.7%	2.6%
Other	4.5%	4.0%	3.6%	3.8%	4.1%	4.4%	3.9%	3.7%	3.8%	4.0%	3.5%	4.7%	4.6%	4.7%	4.8%	4.7%	4.8%	5.0%	4.9%	4.9%
Y/Y (bps)																				
Google	(258)	(118)	(183)	(229)	(186)	(211)	(86)	34	56	163	223	(78)	(66)	(123)	(97)	(20)	(103)	(237)	(274)	(334)
bing	314	222	236	272	175	175	124	29	14	(100)	(151)	7	35	37	(49)	(81)	(8)	158	165	199
Yahoo!	(15)	(47)	(29)	(30)	(33)	(17)	(26)	(40)	(32)	(50)	(39)	3	18	19	26	13	46	20	8	12
Other	(40)	(59)	(21)	(13)	41	53	(14)	(22)	(40)	(13)	(29)	69	16	66	118	88	65	59	101	124
M/M (bps)																				
Google	(57)	61	5	(107)	4	30	61	95	(11)	131	81	(371)	(45)	4	31	(30)	(79)	(104)	24	35
bing	17	(8)	39	77	(28)	(69)	(10)	(67)	1	(114)	(24)	193	45	(6)	(47)	45	45	97	(3)	(33)
Yahoo!	(4)	(6)	(2)	9	(8)	13	(1)	(11)	(5)	(30)	(5)	53	11	(5)	5	(4)	25	(13)	(13)	(7)
Other	43	(45)	(40)	19	32	26	(50)	(18)	14	14	(50)	124	(10)	5	12	(11)	9	20	(8)	5

Source: Statcounter, BofA Global Research

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Web Traffic

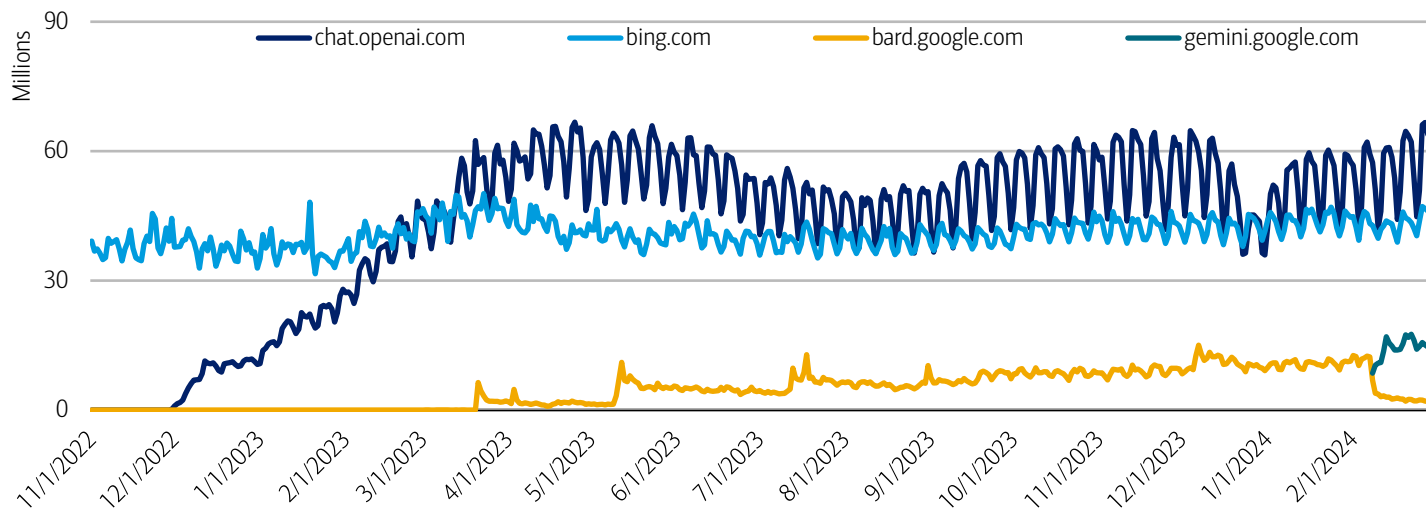
ChatGPT Web traffic remains above Gemini (Bard) but a small fraction of Google

Similarweb data suggests that web traffic for ChatGPT, Bing and Bard (rebranded to Gemini in middle of Feb) saw m/m increase in Feb, while Google was flat. As of 2/29, on

a 7-day moving average, web visits to ChatGPT were up 11% m/m to 58mn, Bing were up 1% m/m to 44mn, Google was flat y/y to 2.8bn & Gemini were up 40% m/m to 15mn but remain well below ChatGPT. (Note: 40% m/m increase represents Gemini website visits compared against Bard website visits of 10.7mn as of 1/31, on a 7-day moving average).

Exhibit 4: Daily web traffic (mn)

As of 2/29, on a 7-day moving average, web visits to ChatGPT increased 11% m/m vs Gemini (Bard rebranded) increased 40% m/m.



Source: Similarweb, BofA Global Research

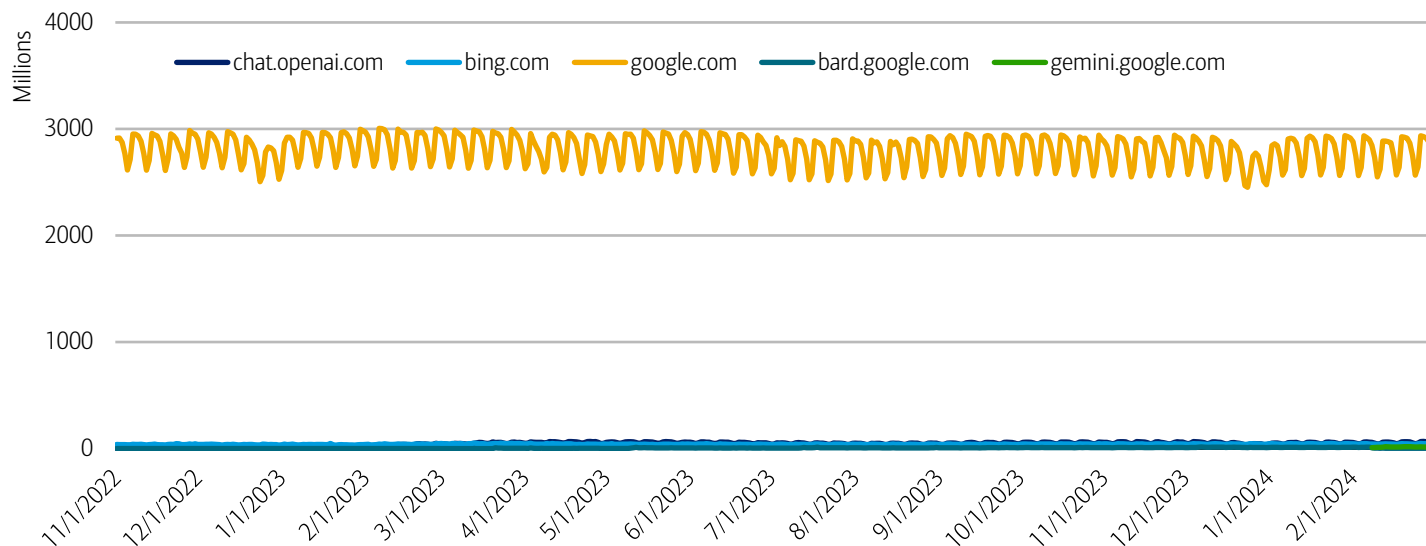
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Google web traffic was flat m/m in Feb

Daily web traffic to Google were stable in Feb. As of 2/29, Google web traffic was flat m/m at 2.8bn (on a 7-day moving avg) vs ChatGPT up 11% m/m. In Feb, Google web traffic was 63x that of Bing and 48x that of ChatGPT.

Exhibit 5: Daily web traffic (mn)

As of 2/29, Google Web traffic of 2.8bn was 63x that of Bing and 48x that of ChatGPT.



Source: Similarweb, BofA Global Research

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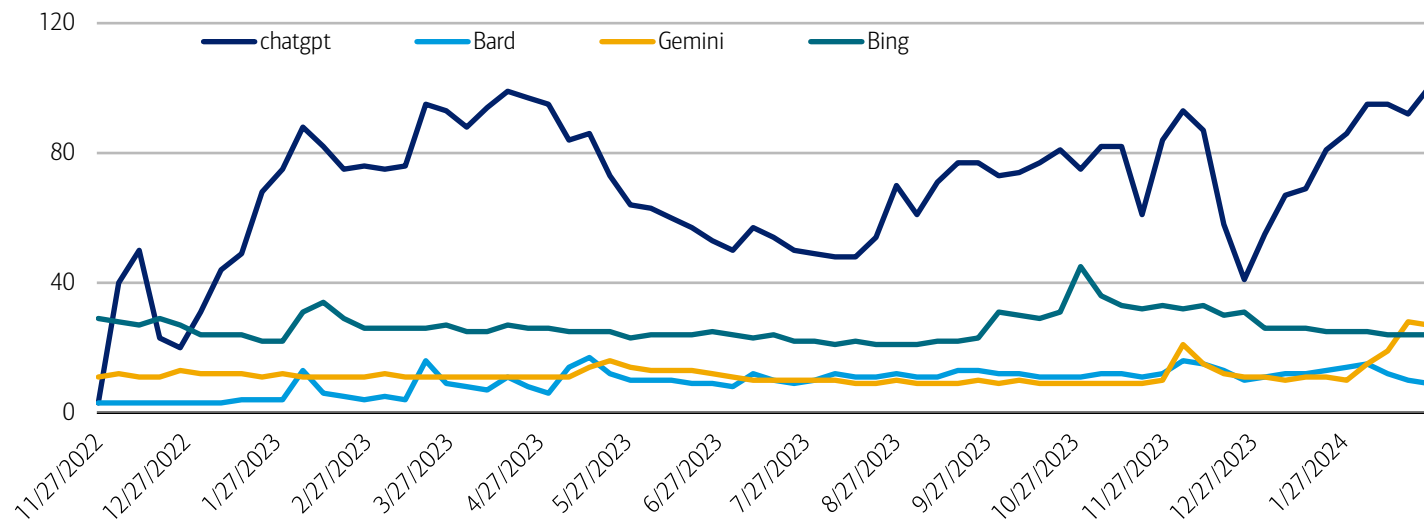
Search interest for ChatGPT continues to increase

Global search interest for "ChatGPT" has rebounded after a temporary decline in Dec. On a 7-day average basis as of 2/25, Google Trends data suggests 16% m/m increase in

search interest for ChatGPT, 170% m/m increase for Gemini (vs Bard down 36% m/m) and Bing down 4% m/m.

Exhibit 6: Global Keyword Search Interest

Search interest in ChatGPT increased 16% m/m and Gemini is seeing an uptick since rebranding (up 170% m/m).



Source: Google Trends, BofA Global Research

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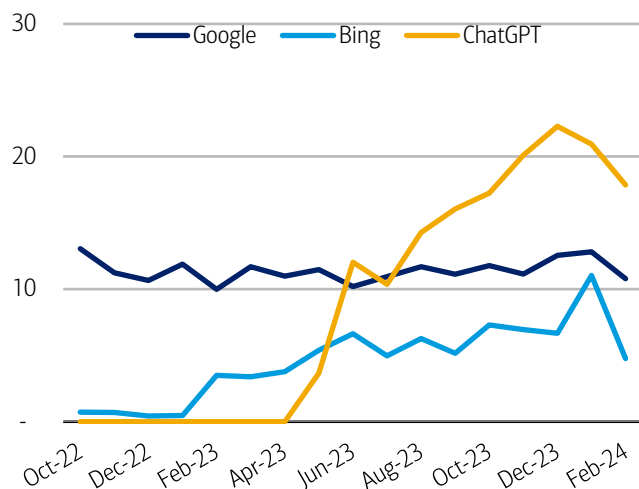
Downloads

Downloads decline for all three platforms (Google, ChatGPT & Bing) in Feb

Per Sensor Tower, in Feb, Google app global downloads declined 16% m/m to 10.8mn, while Bing app downloads declined 57% m/m to 4.8mn and ChatGPT app downloads were down 15% m/m to 17.9mn. In US, Google app downloads declined 15% m/m to 2.5mn, while Bing app downloads were down 44% m/m to 0.33mn, and ChatGPT app downloads declined 8% m/m to 3.2mn.

Exhibit 7: Global Monthly Downloads (mn)

In Feb, Google app global downloads declined 16% m/m to 11mn.

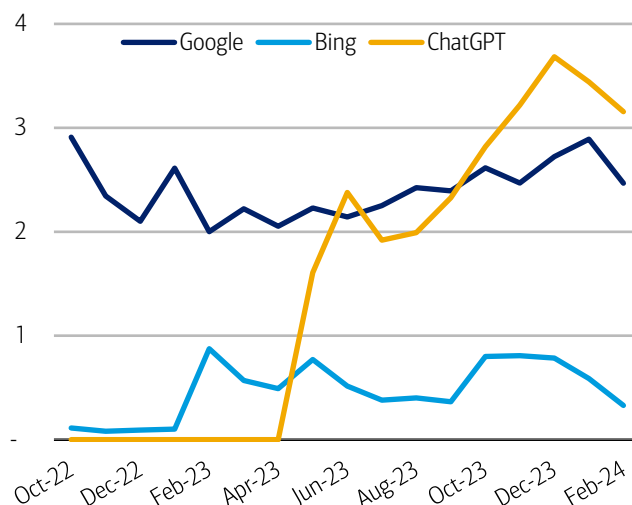


Source: Sensor Tower

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Exhibit 8: US Monthly Downloads (mn)

In Feb, Google app US downloads declined 15% m/m to 2.5mn.



Source: Sensor Tower

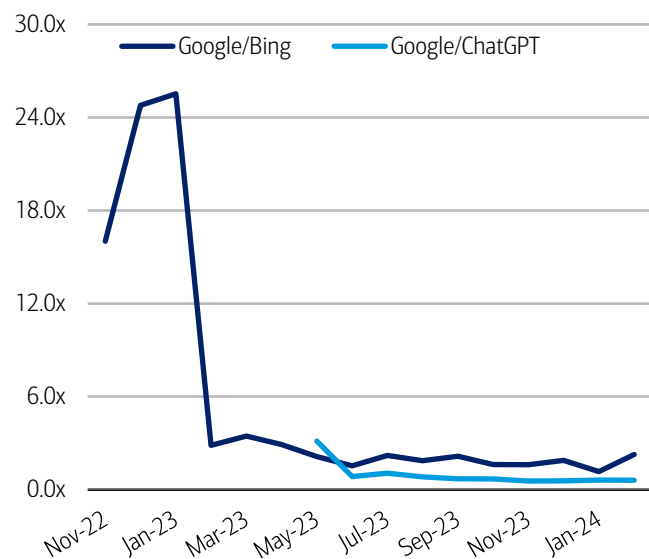
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Google vs. Bing & ChatGPT App Download Ratio

Per Sensor Tower, in February, Google to Bing download ratio was 2.3x globally and 7.5x in US, while compared to ChatGPT, Google had 0.6x downloads globally and 0.8x in US.

Exhibit 9: Global Google-to Bing & ChatGPT download ratio

In Feb, global Google/Bing download ratio was 2.3x & ChatGPT 0.6x.

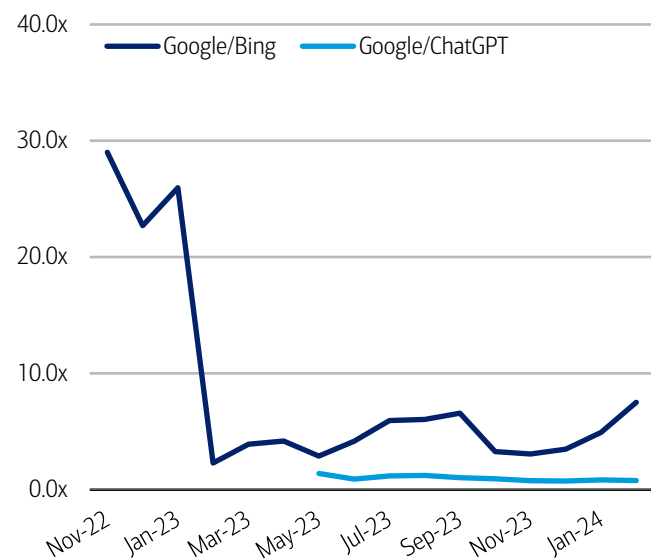


Source: Sensor Tower

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Exhibit 10: US Google-to Bing & ChatGPT download ratio

In Feb, US Google/Bing download ratio was 7.5x & ChatGPT 0.8x.



Source: Sensor Tower

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Price objective basis & risk

Alphabet (GOOGL / GOOG)

Our price objective of \$173/\$173 is based on 21x 2025E core Google GAAP EPS plus cash. Alphabet has traded at an average multiple of 22x GAAP P/E over the last ten years and we think our multiple is reasonable vs history given expectations for double-digit revenue growth, Cloud margin expansion, and opportunity to capitalize on strong AI assets.

Risks for the stock are 1) loss of search traffic to AI tools from competitors, 2) LLM integration in search may take longer than expected or negatively impact search revenues, 3) revenue pressure from compliance with the EU Digital Markets Act (DMA), 4) adverse judge ruling on the ongoing Department of Justice (DOJ) search distribution trial, 5) potential for increasing Capex and lower FCF-given AI focus.

Analyst Certification

I, Justin Post, 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
	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
	Expedia	EXPE	EXPE US	Justin Post
	Instacart	CART	CART US	Justin Post
	Magnite, Inc.	MGNI	MGNI US	Omar Dessouky, CFA
	Snap	SNAP	SNAP US	Justin Post
	Take-Two Interactive	TTWO	TTWO US	Omar Dessouky, CFA
	Zillow	ZG	ZG US	Curtis Nagle, CFA
	Zillow	Z	Z US	Curtis Nagle, CFA

US - Internet Coverage Cluster

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

iQmethodSM Measures Definitions**Business Performance**

Return On Capital Employed

Return On Equity
Operating Margin
Earnings Growth
Free Cash Flow

Quality of Earnings

Cash Realization Ratio
Asset Replacement Ratio
Tax Rate
Net Debt-To-Equity Ratio
Interest Cover

Valuation Toolkit

Price / Earnings Ratio
Price / Book Value
Dividend Yield
Free Cash Flow Yield
Enterprise Value / Sales

EV / EBITDA

Numerator

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

Net Income
Operating Profit
Expected 5 Year CAGR From Latest Actual
Cash Flow From Operations – Total Capex

Numerator

Cash Flow From Operations
Capex
Tax Charge
Net Debt = Total Debt – Cash & Equivalents
EBIT

Numerator

Current Share Price
Current Share Price
Annualised Declared Cash Dividend
Cash Flow From Operations – Total Capex
EV = Current Share Price × Current Shares + Minority Equity + Net Debt + Other LT Liabilities
Enterprise Value

Denominator

Total Assets – Current Liabilities + ST Debt + Accumulated Goodwill
Amortization
Shareholders' Equity
Sales
N/A
N/A

Denominator

Net Income
Depreciation
Pre-Tax Income
Total Equity
Interest Expense

Denominator

Diluted Earnings Per Share (Basis As Specified)
Shareholders' Equity / Current Basic Shares
Current Share Price
Market Cap = Current Share Price × Current Basic Shares
Sales

Basic EBIT + Depreciation + Amortization

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 valuations. 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.

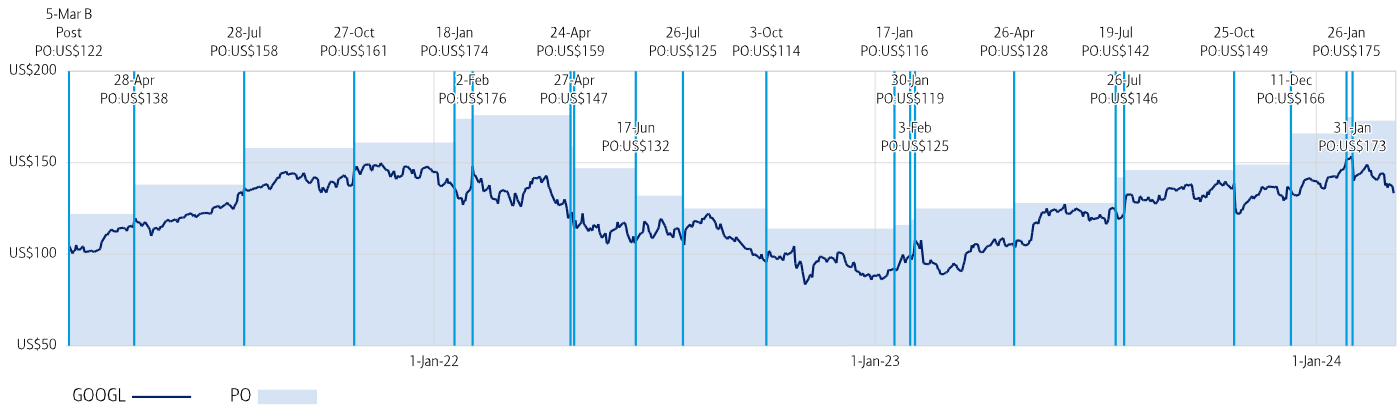
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Important Disclosures

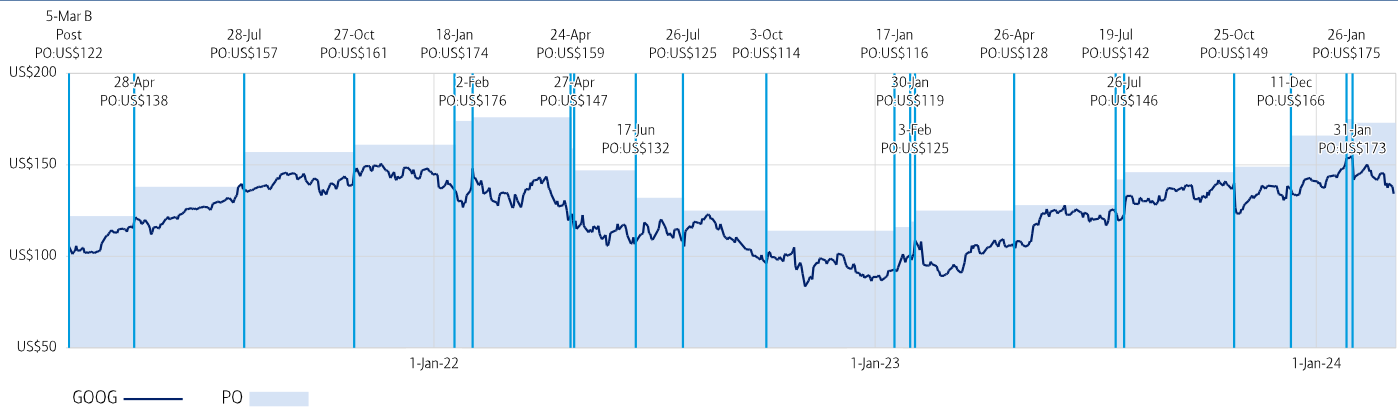
Alphabet A (GOOGL) Price Chart



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

The Investment Opinion System is contained at the end of the report under the heading "Fundamental Equity Opinion Key". Dark grey shading indicates the security is restricted with the opinion suspended. Medium grey shading indicates the security is under review with the opinion withdrawn. Light grey shading indicates the security is not covered. Chart is current as of a date no more than one trading day prior to the date of the report.

Alphabet C (GOOG) Price Chart



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

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

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

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

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

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

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

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

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