UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
Washington, D.C. 20549

FORM 10-Q

(Mark One)

☒ **QUARTERLY REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934**

For the quarterly period ended June 30, 2021
OR

☐ **TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934**

For the transition period from _______ to _______
Commission file number: **001-37580**

Alphabet Inc.
(Exact name of registrant as specified in its charter)

Delaware	**61-1767919**
(State or other jurisdiction of incorporation or organization)	(I.R.S. Employer Identification Number)

1600 Amphitheatre Parkway
Mountain View, CA 94043
(Address of principal executive offices, including zip code)
(650) 253-0000
(Registrant's telephone number, including area code)

Securities registered pursuant to Section 12(b) of the Act:

Title of each class	Trading Symbol(s)	Name of each exchange on which registered
Class A Common Stock, $0.001 par value	**GOOGL**	**Nasdaq Stock Market LLC (Nasdaq Global Select Market)**
Class C Capital Stock, $0.001 par value	**GOOG**	**Nasdaq Stock Market LLC (Nasdaq Global Select Market)**

Indicate by check mark whether the registrant: (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days. Yes ☒ No ☐

Indicate by check mark whether the registrant has submitted electronically every Interactive Data File required to be submitted pursuant to Rule 405 of Regulation S-T (§232.405 of this chapter) during the preceding 12 months (or for such shorter period that the registrant was required to submit such files). Yes ☒ No ☐

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, a smaller reporting company, or an emerging growth company. See the definitions of “large accelerated filer,” “accelerated filer,” “smaller reporting company,” and "emerging growth company" in Rule 12b-2 of the Exchange Act.

Large accelerated filer	☒	Accelerated filer	☐
Non-accelerated filer	☐	Smaller reporting company	☐
Emerging growth company	☐		

If an emerging growth company, indicate by check mark if the registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards provided pursuant to Section 13(a) of the Exchange Act. ☐

Indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Exchange Act). Yes ☐ No ☒

As of July 20, 2021, there were 301,084,627 shares of Alphabet’s Class A common stock outstanding, 45,501,786 shares of Alphabet's Class B common stock outstanding, and 320,168,491 shares of Alphabet's Class C capital stock outstanding.

Alphabet Inc.
Form 10-Q
For the Quarterly Period Ended June 30, 2021

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Note About Forward-Looking Statements

This Quarterly Report on Form 10-Q contains forward-looking statements within the meaning of the Private Securities Litigation Reform Act of 1995. These statements include, among other things, statements regarding:

- the ongoing effect of the novel coronavirus pandemic ("COVID-19"), including its macroeconomic effects on our business, operations, and financial results; and the effect of governmental lockdowns, restrictions and new regulations on our operations and processes;
- the growth of our business and revenues and our expectations about the factors that influence our success and trends in our business, including the size and timing of the expected return on our continuing investments in our Google Cloud segment;
- fluctuations in our revenue growth rate and operating margin and various factors contributing to such fluctuations;
- our expectation that the shift from an offline to online world will continue to benefit our business;
- our expectation that the portion of our revenues that we derive from non-advertising revenues will continue to increase and may affect our margins;
- our expectation that our traffic acquisition costs ("TAC") and the associated TAC rate will fluctuate, which could affect our overall margins;
- our expectation that our monetization trends will fluctuate, which could affect our revenues and margins;
- fluctuations in our revenue growth, as well as the change in paid clicks and cost-per-click and the change in impressions and cost-per-impression, and various factors contributing to such fluctuations;
- our expectation that we will continue to periodically review, refine, and update our methodologies for monitoring, gathering, and counting the number of paid clicks and impressions;
- our expectation that our results will be affected by our performance in international markets as users in developing economies increasingly come online;
- our expectation that our foreign exchange risk management program will not fully offset our net exposure to fluctuations in foreign currency exchange rates;
- the expected variability of gains and losses related to hedging activities under our foreign exchange risk management program;
- the amount and timing of revenue recognition from customer contracts with commitments for performance obligations, including our estimate of the remaining amount of commitments and when we expect to recognize revenue;
- fluctuations in our capital expenditures;
- our plans to continue to invest in new businesses, products, services and technologies, systems, land and buildings for data centers and offices, and infrastructure, as well as to continue to invest in acquisitions;
- our pace of hiring and our plans to provide competitive compensation programs;
- our expectation that our cost of revenues, research and development ("R&D") expenses, sales and marketing expenses, and general and administrative expenses may increase in amount and/or may increase as a percentage of revenues and may be affected by a number of factors;
- estimates of our future compensation expenses;
- our expectation that our other income (expense), net ("OI&E"), will fluctuate in the future, as it is largely driven by market dynamics;
- fluctuations in our effective tax rate;
- seasonal fluctuations in internet usage and advertiser expenditures, underlying business trends such as traditional retail seasonality (including developments and volatility arising from COVID-19), which are likely to cause fluctuations in our quarterly results;
- the sufficiency of our sources of funding;
- our potential exposure in connection with new and pending investigations, proceedings, and other contingencies;

- the sufficiency and timing of our proposed remedies in response to decisions from the European Commission ("EC") and other regulators and governmental entities;
- our expectations regarding the timing, design and implementation of our new global enterprise resource planning ("ERP") system;
- the expected timing, amount, and impact of Alphabet Inc.'s share repurchases;
- our long-term sustainability and diversity goals;
- our expectation that the change in the estimated useful life of servers and certain network equipment will have a favorable, yet declining, effect on our 2021 operating results;

as well as other statements regarding our future operations, financial condition and prospects, and business strategies. Forward-looking statements may appear throughout this report and other documents we file with the Securities and Exchange Commission ("SEC"), including without limitation, the following sections: Part I, Item 2, "Management's Discussion and Analysis of Financial Condition and Results of Operations" in this Quarterly Report on Form 10-Q and Part I, Item 1A, “Risk Factors” in our Annual Report on Form 10-K for the fiscal year ended December 31, 2020, as updated in this Quarterly Report on Form 10-Q. Forward-looking statements generally can be identified by words such as "anticipates," "believes," "estimates," "expects," "intends," "plans," "predicts," "projects," "will be," "will continue," "may," "could," "will likely result," and similar expressions. These forward-looking statements are based on current expectations and assumptions that are subject to risks and uncertainties, which could cause our actual results to differ materially from those reflected in the forward-looking statements. Factors that could cause or contribute to such differences include, but are not limited to, those discussed in this Quarterly Report on Form 10-Q, and in particular, the risks discussed in Part I, Item 1A, "Risk Factors" in our Annual Report on Form 10-K for the fiscal year ended December 31, 2020, as updated in this Quarterly Report on Form 10-Q, and those discussed in other documents we file with the SEC. We undertake no obligation to revise or publicly release the results of any revision to these forward-looking statements, except as required by law. Given these risks and uncertainties, readers are cautioned not to place undue reliance on such forward-looking statements.

As used herein, "Alphabet," "the company," "we," "us," "our," and similar terms include Alphabet Inc. and its subsidiaries, unless the context indicates otherwise.

"Alphabet," "Google," and other trademarks of ours appearing in this report are our property. This report contains additional trade names and trademarks of other companies. We do not intend our use or display of other companies' trade names or trademarks to imply an endorsement or sponsorship of us by such companies, or any relationship with any of these companies.

PART I. FINANCIAL INFORMATION

ITEM 1. FINANCIAL STATEMENTS

Alphabet Inc.
CONSOLIDATED BALANCE SHEETS
(in millions, except share amounts which are reflected in thousands, and par value per share amounts)

	As of December 31, 2020	As of June 30, 2021 (unaudited)
Assets		
Current assets:		
Cash and cash equivalents	$ 26,465	$ 23,630
Marketable securities	110,229	112,233
Total cash, cash equivalents, and marketable securities	136,694	135,863
Accounts receivable, net	30,930	31,967
Income taxes receivable, net	454	884
Inventory	728	907
Other current assets	5,490	6,076
Total current assets	174,296	175,697
Non-marketable investments	20,703	25,532
Deferred income taxes	1,084	1,153
Property and equipment, net	84,749	91,697
Operating lease assets	12,211	12,978
Intangible assets, net	1,445	1,626
Goodwill	21,175	22,406
Other non-current assets	3,953	4,298
Total assets	$ 319,616	$ 335,387
Liabilities and Stockholders' Equity		
Current liabilities:		
Accounts payable	$ 5,589	$ 4,708
Accrued compensation and benefits	11,086	10,088
Accrued expenses and other current liabilities	28,631	28,981
Accrued revenue share	7,500	7,438
Deferred revenue	2,543	2,715
Income taxes payable, net	1,485	1,811
Total current liabilities	56,834	55,741
Long-term debt	13,932	14,328
Deferred revenue, non-current	481	510
Income taxes payable, non-current	8,849	8,651
Deferred income taxes	3,561	4,703
Operating lease liabilities	11,146	11,619
Other long-term liabilities	2,269	2,270
Total liabilities	97,072	97,822
Contingencies (Note 9)		
Stockholders' equity:		
Convertible preferred stock, $0.001 par value per share: 100,000 shares authorized; no shares issued and outstanding	0	0
Class A and Class B common stock, and Class C capital stock and additional paid-in capital, $0.001 par value per share: 15,000,000 shares authorized (Class A 9,000,000, Class B 3,000,000, Class C 3,000,000); 675,222 (Class A 300,730, Class B 45,843, Class C 328,649) and 667,637 (Class A 301,040, Class B 45,546, Class C 321,051) shares issued and outstanding	58,510	60,436
Accumulated other comprehensive income (loss)	633	190
Retained earnings	163,401	176,939
Total stockholders' equity	222,544	237,565
Total liabilities and stockholders' equity	$ 319,616	$ 335,387

See accompanying notes.

Alphabet Inc.
CONSOLIDATED STATEMENTS OF INCOME
(in millions, except per share amounts; unaudited)

	Three Months Ended June 30,		Six Months Ended June 30,	
	2020	2021	2020	2021
Revenues	$ 38,297	$ 61,880	$ 79,456	$ 117,194
Costs and expenses:				
Cost of revenues	18,553	26,227	37,535	50,330
Research and development	6,875	7,675	13,695	15,160
Sales and marketing	3,901	5,276	8,401	9,792
General and administrative	2,585	3,341	5,465	6,114
Total costs and expenses	31,914	42,519	65,096	81,396
Income from operations	6,383	19,361	14,360	35,798
Other income (expense), net	1,894	2,624	1,674	7,470
Income before income taxes	8,277	21,985	16,034	43,268
Provision for income taxes	1,318	3,460	2,239	6,813
Net income	$ 6,959	$ 18,525	$ 13,795	$ 36,455
Basic net income per share of Class A and B common stock and Class C capital stock	$ 10.21	$ 27.69	$ 20.16	$ 54.32
Diluted net income per share of Class A and B common stock and Class C capital stock	$ 10.13	$ 27.26	$ 20.00	$ 53.54

See accompanying notes.

Alphabet Inc.
CONSOLIDATED STATEMENTS OF COMPREHENSIVE INCOME
(in millions; unaudited)

	Three Months Ended June 30,		Six Months Ended June 30,	
	2020	2021	2020	2021
Net income	$ 6,959	$ 18,525	$ 13,795	$ 36,455
Other comprehensive income (loss):				
Change in foreign currency translation adjustment	284	366	(266)	(57)
Available-for-sale investments:				
Change in net unrealized gains (losses)	867	(52)	1,365	(540)
Less: reclassification adjustment for net (gains) losses included in net income	(149)	(75)	(318)	(64)
Net change, net of income tax benefit (expense) of $(220), $37, $(301) and $172	718	(127)	1,047	(604)
Cash flow hedges:				
Change in net unrealized gains (losses)	(86)	(42)	292	137
Less: reclassification adjustment for net (gains) losses included in net income	(115)	(4)	(137)	81
Net change, net of income tax benefit (expense) of $35, $15, $(46) and $(35)	(201)	(46)	155	218
Other comprehensive income (loss)	801	193	936	(443)
Comprehensive income	$ 7,760	$ 18,718	$ 14,731	$ 36,012

See accompanying notes.

Alphabet Inc.
CONSOLIDATED STATEMENTS OF STOCKHOLDERS' EQUITY
(In millions, except share amounts which are reflected in thousands; unaudited)

	Three Months Ended June 30, 2020				
	Class A and Class B Common Stock, Class C Capital Stock and Additional Paid-In Capital		Accumulated Other Comprehensive Income (Loss)	Retained Earnings	Total Stockholders' Equity
	Shares	Amount			
Balance as of March 31, 2020	683,972	$ 53,688	$ (1,097)	$ 151,068	$ 203,659
Common and capital stock issued	2,391	37	0	0	37
Stock-based compensation expense	0	3,413	0	0	3,413
Tax withholding related to vesting of restricted stock units and other	0	(1,558)	0	0	(1,558)
Repurchases of capital stock	(5,148)	(506)	0	(6,346)	(6,852)
Sale of interest in consolidated entities	0	863	0	0	863
Net income	0	0	0	6,959	6,959
Other comprehensive income (loss)	0	0	801	0	801
Balance as of June 30, 2020	681,215	$ 55,937	$ (296)	$ 151,681	$ 207,322

	Six Months Ended June 30, 2020				
	Class A and Class B Common Stock, Class C Capital Stock and Additional Paid-In Capital		Accumulated Other Comprehensive Income (Loss)	Retained Earnings	Total Stockholders' Equity
	Shares	Amount			
Balance as of December 31, 2019	688,335	$ 50,552	$ (1,232)	$ 152,122	$ 201,442
Common and capital stock issued	4,516	143	0	0	143
Stock-based compensation expense	0	6,635	0	0	6,635
Tax withholding related to vesting of restricted stock units and other	0	(2,737)	0	0	(2,737)
Repurchases of capital stock	(11,636)	(1,112)	0	(14,236)	(15,348)
Sale of interest in consolidated entities	0	2,456	0	0	2,456
Net income	0	0	0	13,795	13,795
Other comprehensive income (loss)	0	0	936	0	936
Balance as of June 30, 2020	681,215	$ 55,937	$ (296)	$ 151,681	$ 207,322

	Three Months Ended June 30, 2021					
	Class A and Class B Common Stock, Class C Capital Stock and Additional Paid-In Capital		Accumulated Other Comprehensive Income (Loss)	Retained Earnings	Total Stockholders' Equity
	Shares	Amount			
Balance as of March 31, 2021	671,094	$ 59,436	$ (3)	$ 170,580	$ 230,013
Common and capital stock issued	1,919	1	0	0	1
Stock-based compensation expense	0	3,844	0	0	3,844
Tax withholding related to vesting of restricted stock units and other	0	(2,515)	0	0	(2,515)
Repurchases of capital stock	(5,376)	(630)	0	(12,166)	(12,796)
Sale of interest in consolidated entities	0	300	0	0	300
Net income	0	0	0	18,525	18,525
Other comprehensive income (loss)	0	0	193	0	193
Balance as of June 30, 2021	667,637	$ 60,436	$ 190	$ 176,939	$ 237,565

	Six Months Ended June 30, 2021				
	Class A and Class B Common Stock, Class C Capital Stock and Additional Paid-In Capital		Accumulated Other Comprehensive Income (Loss)	Retained Earnings	Total Stockholders' Equity
	Shares	Amount			
Balance as of December 31, 2020	675,222	$ 58,510	$ 633	$ 163,401	$ 222,544
Common and capital stock issued	3,488	7	0	0	7
Stock-based compensation expense	0	7,632	0	0	7,632
Tax withholding related to vesting of restricted stock units and other	0	(4,749)	0	0	(4,749)
Repurchases of capital stock	(11,073)	(1,274)	0	(22,917)	(24,191)
Sale of interest in consolidated entities	0	310	0	0	310
Net income	0	0	0	36,455	36,455
Other comprehensive income (loss)	0	0	(443)	0	(443)
Balance as of June 30, 2021	667,637	$ 60,436	$ 190	$ 176,939	$ 237,565

See accompanying notes.

Alphabet Inc.
CONSOLIDATED STATEMENTS OF CASH FLOWS
(in millions; unaudited)

	Six Months Ended June 30, 2020	Six Months Ended June 30, 2021
Operating activities		
Net income	$ 13,795	$ 36,455
Adjustments:		
Depreciation and impairment of property and equipment	6,077	5,255
Amortization and impairment of intangible assets	417	443
Stock-based compensation expense	6,573	7,548
Deferred income taxes	(416)	1,479
Gain on debt and equity securities, net	(1,040)	(7,634)
Other	669	(263)
Changes in assets and liabilities, net of effects of acquisitions:		
Accounts receivable	2,522	(867)
Income taxes, net	538	(297)
Other assets	(359)	(192)
Accounts payable	(689)	(1,112)
Accrued expenses and other liabilities	(2,099)	201
Accrued revenue share	(692)	29
Deferred revenue	148	134
Net cash provided by operating activities	25,444	41,179
Investing activities		
Purchases of property and equipment	(11,396)	(11,438)
Purchases of marketable securities	(64,111)	(60,609)
Maturities and sales of marketable securities	65,874	60,667
Purchases of non-marketable investments	(1,311)	(1,412)
Maturities and sales of non-marketable investments	473	256
Acquisitions, net of cash acquired, and purchases of intangible assets	(355)	(1,974)
Other investing activities	531	53
Net cash used in investing activities	(10,295)	(14,457)
Financing activities		
Net payments related to stock-based award activities	(2,716)	(4,637)
Repurchases of capital stock	(15,348)	(24,191)
Proceeds from issuance of debt, net of costs	1,898	7,599
Repayments of debt	(1,982)	(8,678)
Proceeds from sale of interest in consolidated entities, net	2,464	310
Net cash used in financing activities	(15,684)	(29,597)
Effect of exchange rate changes on cash and cash equivalents	(221)	40
Net decrease in cash and cash equivalents	(756)	(2,835)
Cash and cash equivalents at beginning of period	18,498	26,465
Cash and cash equivalents at end of period	$ 17,742	$ 23,630

See accompanying notes.

Alphabet Inc.
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS
(Unaudited)

Note 1. Nature of Operations and Summary of Significant Accounting Policies

Nature of Operations

Google was incorporated in California in September 1998 and re-incorporated in the State of Delaware in August 2003. In 2015, we implemented a holding company reorganization, and as a result, Alphabet became the successor issuer to Google.

We generate revenues by delivering relevant, cost-effective online advertising, cloud-based solutions that provide customers with platforms, collaboration tools and services, and sales of other products and services, such as apps and in-app purchases, digital content and subscriptions for digital content, and hardware.

Basis of Consolidation

The consolidated financial statements of Alphabet include the accounts of Alphabet and entities consolidated under the variable interest and voting models. All intercompany balances and transactions have been eliminated.

Unaudited Interim Financial Information

The Consolidated Balance Sheet as of June 30, 2021, the Consolidated Statements of Income for the three and six months ended June 30, 2020 and 2021, the Consolidated Statements of Comprehensive Income for the three and six months ended June 30, 2020 and 2021, the Consolidated Statements of Stockholders' Equity for the three and six months ended June 30, 2020 and 2021 and the Consolidated Statements of Cash Flows for the six months ended June 30, 2020 and 2021 are unaudited. These unaudited interim consolidated financial statements have been prepared in accordance with generally accepted accounting principles in the United States ("GAAP"). In our opinion, the unaudited interim consolidated financial statements include all adjustments of a normal recurring nature necessary for the fair presentation of our financial position as of June 30, 2021, our results of operations for the three and six months ended June 30, 2020 and 2021, and our cash flows for the six months ended June 30, 2020 and 2021. The results of operations for the three and six months ended June 30, 2021 are not necessarily indicative of the results to be expected for the year ending December 31, 2021.

These unaudited interim consolidated financial statements should be read in conjunction with the consolidated financial statements and the related notes included in our Annual Report on Form 10-K for the fiscal year ended December 31, 2020 filed with the SEC.

Use of Estimates

Preparation of consolidated financial statements in conformity with GAAP requires us to make estimates and assumptions that affect the amounts reported and disclosed in the financial statements and the accompanying notes. Actual results could differ materially from these estimates. On an ongoing basis, we evaluate our estimates, including those related to the allowance for credit losses, fair values of financial instruments, intangible assets and goodwill, useful lives of intangible assets and property and equipment, income taxes, and contingent liabilities, among others. We base our estimates on assumptions, both historical and forward looking, that are believed to be reasonable, the results of which form the basis for making judgments about the carrying values of assets and liabilities.

The allowance for credit losses on accounts receivable was $789 million and $579 million as of December 31, 2020 and June 30, 2021, respectively.

Change in Accounting Estimate

In January 2021, we completed an assessment of the useful lives of our servers and network equipment and adjusted the estimated useful life of our servers from three years to four years and the estimated useful life of certain network equipment from three years to five years. This change in accounting estimate was effective beginning in fiscal year 2021. Based on the carrying value of servers and certain network equipment as of December 31, 2020, and those acquired during the six months ended June 30, 2021, the effect of this change in estimate was a reduction in depreciation expense of $721 million and $1.6 billion and an increase in net income of $561 million and $1.2 billion, or $0.84 and $1.81 per basic and $0.83 and $1.78 per diluted share, for the three and six months ended June 30, 2021, respectively.

Prior Period Reclassifications

Certain amounts in prior periods have been reclassified to conform with current period presentation.

Note 2. Revenues

Revenue Recognition

The following table presents our revenues disaggregated by type (in millions).

	Three Months Ended June 30,		Six Months Ended June 30,	
	2020	2021	2020	2021
Google Search & other	$ 21,319	$ 35,845	$ 45,821	$ 67,724
YouTube ads	3,812	7,002	7,850	13,007
Google Network	4,736	7,597	9,959	14,397
Google advertising	29,867	50,444	63,630	95,128
Google other	5,124	6,623	9,559	13,117
Google Services total	34,991	57,067	73,189	108,245
Google Cloud	3,007	4,628	5,784	8,675
Other Bets	148	192	283	390
Hedging gains (losses)	151	(7)	200	(116)
Total revenues	$ 38,297	$ 61,880	$ 79,456	$ 117,194

The following table presents our revenues disaggregated by geography, based on the addresses of our customers (in millions):

	Three Months Ended June 30,				Six Months Ended June 30,			
	2020		2021		2020		2021	
United States	$ 17,999	47 %	$ 28,208	46 %	$ 36,869	47 %	$ 53,240	45 %
EMEA[(1)]	11,363	30	19,084	31	24,208	30	36,115	31
APAC[(1)]	6,945	18	11,231	18	14,183	18	21,686	19
Other Americas[(1)]	1,839	5	3,364	5	3,996	5	6,269	5
Hedging gains (losses)	151	0	(7)	0	200	0	(116)	0
Total revenues	$ 38,297	100 %	$ 61,880	100 %	$ 79,456	100 %	$ 117,194	100 %

(1) Regions represent Europe, the Middle East, and Africa ("EMEA"); Asia-Pacific ("APAC"); and Canada and Latin America ("Other Americas").

Deferred Revenues and Remaining Performance Obligations

We record deferred revenues when cash payments are received or due in advance of our performance, including amounts which are refundable. Deferred revenues primarily relate to Google Cloud and Google other. Our total deferred revenue was $3.0 billion and $3.2 billion as of December 31, 2020 and June 30, 2021, respectively. Of the total deferred revenue as of December 31, 2020, $1.8 billion was recognized as revenues during the six months ended June 30, 2021.

Additionally, we have performance obligations associated with commitments in customer contracts, primarily related to Google Cloud, for future services that have not yet been recognized as revenues, also referred to as remaining performance obligations. Remaining performance obligations include related deferred revenue currently recorded as well as amounts that will be invoiced in future periods, and excludes (i) contracts with an original expected term of one year or less, (ii) cancellable contracts, and (iii) contracts for which we recognize revenue at the amount to which we have the right to invoice for services performed. As of June 30, 2021, the amount not yet recognized as revenues from these commitments was $35.3 billion. We expect to recognize approximately half over the next 24 months with the remaining thereafter. However, the amount and timing of revenue recognition is largely driven by when the customer utilizes the services and our ability to deliver in accordance with relevant contract terms, which could affect our estimate of the remaining performance obligations and when we expect to recognize such as revenues.

Note 3. Financial Instruments

Debt Securities

We classify our marketable debt securities, which are accounted for as available-for-sale, within Level 2 in the fair value hierarchy because we use quoted market prices to the extent available or alternative pricing sources and models utilizing market observable inputs to determine fair value.

For certain marketable debt securities, we have elected the fair value option for which changes in fair value are recorded in other income (expense), net. The fair value option was elected for these securities to align with the unrealized gains and losses from related derivative contracts. Unrealized net gains related to debt securities still held where we have elected the fair value option were $87 million and $52 million as of December 31, 2020 and June 30, 2021, respectively. As of December 31, 2020 and June 30, 2021, the fair value of these debt securities was $2.0 billion and $2.8 billion, respectively.

The following tables summarize our debt securities, for which we did not elect the fair value option, by significant investment categories (in millions):

	As of December 31, 2020					
	Adjusted Cost	Gross Unrealized Gains	Gross Unrealized Losses	Fair Value	Cash and Cash Equivalents	Marketable Securities
Level 2:						
Time deposits[1]	$ 3,564	$ 0	$ 0	$ 3,564	$ 3,564	$ 0
Government bonds	55,156	793	(9)	55,940	2,527	53,413
Corporate debt securities	31,521	704	(2)	32,223	8	32,215
Mortgage-backed and asset-backed securities	16,767	364	(7)	17,124	0	17,124
Total	$ 107,008	$ 1,861	$ (18)	$ 108,851	$ 6,099	$ 102,752

	As of June 30, 2021					
	Adjusted Cost	Gross Unrealized Gains	Gross Unrealized Losses	Fair Value	Cash and Cash Equivalents	Marketable Securities
Level 2:						
Time deposits[1]	$ 6,311	$ 0	$ 0	$ 6,311	$ 6,311	$ 0
Government bonds	50,959	497	(50)	51,406	404	51,002
Corporate debt securities	34,476	444	(41)	34,879	0	34,879
Mortgage-backed and asset-backed securities	17,098	199	(33)	17,264	0	17,264
Total	$ 108,844	$ 1,140	$ (124)	$ 109,860	$ 6,715	$ 103,145

[1] The majority of our time deposits are domestic deposits.

We determine realized gains or losses on the sale or extinguishment of debt securities on a specific identification method. We recognized gross realized gains of $306 million and $116 million for the three months ended June 30, 2020 and 2021, respectively, and $563 million and $251 million for the six months ended June 30, 2020 and 2021, respectively. We recognized gross realized losses of $88 million and $15 million for the three months ended June 30, 2020 and 2021, respectively, and $127 million and $151 million for the six months ended June 30, 2020 and 2021, respectively. We reflect these gains and losses as a component of other income (expense), net.

The following table summarizes the estimated fair value of our investments in marketable debt securities by stated contractual maturity dates (in millions):

	As of June 30, 2021
Due in 1 year or less	$ 20,663
Due in 1 year through 5 years	69,749
Due in 5 years through 10 years	3,297
Due after 10 years	12,245
Total	$ 105,954

The following tables present fair values and gross unrealized losses recorded to AOCI, aggregated by investment category and the length of time that individual securities have been in a continuous loss position (in millions):

	As of December 31, 2020					
	Less than 12 Months		12 Months or Greater		Total	
	Fair Value	Unrealized Loss	Fair Value	Unrealized Loss	Fair Value	Unrealized Loss
Government bonds	$ 5,516	$ (9)	$ 3	$ 0	$ 5,519	$ (9)
Corporate debt securities	1,999	(1)	0	0	1,999	(1)
Mortgage-backed and asset-backed securities	929	(5)	242	(2)	1,171	(7)
Total	$ 8,444	$ (15)	$ 245	$ (2)	$ 8,689	$ (17)

	As of June 30, 2021					
	Less than 12 Months		12 Months or Greater		Total	
	Fair Value	Unrealized Loss	Fair Value	Unrealized Loss	Fair Value	Unrealized Loss
Government bonds	$ 19,730	$ (50)	$ 0	$ 0	$ 19,730	$ (50)
Corporate debt securities	9,681	(24)	0	0	9,681	(24)
Mortgage-backed and asset-backed securities	5,044	(32)	174	(1)	5,218	(33)
Total	$ 34,455	$ (106)	$ 174	$ (1)	$ 34,629	$ (107)

During the three and six months ended June 30, 2020 and 2021, we did not recognize any significant credit losses and the ending allowance balances for credit losses were immaterial as of December 31, 2020 and June 30, 2021.

Equity Investments

The following discusses our marketable equity securities, non-marketable equity securities, gains and losses on marketable and non-marketable equity securities, as well as our equity securities accounted for under the equity method.

Our marketable equity securities are publicly traded stocks or funds measured at fair value and classified within Level 1 and 2 in the fair value hierarchy because we use quoted prices for identical assets in active markets or inputs that are based upon quoted prices for similar instruments in active markets.

Our non-marketable equity securities are investments in privately held companies without readily determinable market values. The carrying value of our non-marketable equity securities is adjusted to fair value upon observable transactions for identical or similar investments of the same issuer or impairment (referred to as the measurement alternative). Non-marketable equity securities that have been remeasured during the period based on observable transactions are classified within Level 2 or Level 3 in the fair value hierarchy because we estimate the value based on valuation methods which may include a combination of the observable transaction price at the transaction date and other unobservable inputs including volatility, rights, and obligations of the securities we hold. The fair value of non-marketable equity securities that have been remeasured due to impairment are classified within Level 3.

Gains and losses on marketable and non-marketable equity securities

Gains and losses reflected in other income (expense), net, for our marketable and non-marketable equity securities are summarized below (in millions):

	Three Months Ended June 30,		Six Months Ended June 30,	
	2020	2021	2020	2021
Net gain (loss) on equity securities sold during the period	$ 18	$ 138	$ 233	$ 506
Net unrealized gain (loss) on equity securities held as of the end of the period	1,437	2,634	408	7,103
Total gain (loss) recognized in other income (expense), net	$ 1,455	$ 2,772	$ 641	$ 7,609

In the table above, net gain (loss) on equity securities sold during the period reflects the difference between the sale proceeds and the carrying value of the equity securities at the beginning of the period or the purchase date, if later.

Cumulative net gains (losses) on equity securities sold during the period, which is summarized in the following table (in millions), represents the total net gains (losses) recognized after the initial purchase date of the equity security. While these net gains may have been reflected in periods prior to the period of sale, we believe they are important supplemental information as they reflect the economic realized net gains on the securities sold during the period. Cumulative net gains are calculated as the difference between the sale price and the initial purchase price for the equity security sold during the period.

	Equity Securities Sold			
	Three Months Ended June 30,		Six Months Ended June 30,	
	2020	2021	2020	2021
Total sale price	$ 590	$ 2,629	$ 1,499	$ 3,353
Total initial cost	424	409	685	766
Cumulative net gains[(1)]	$ 166	$ 2,220	$ 814	$ 2,587

(1) Cumulative net gains excludes cumulative losses of $684 million resulting from our equity derivatives, which hedged the changes in fair value of certain marketable equity securities sold during the second quarter of 2021. The associated derivative liabilities arising from these losses were settled against our holdings of the underlying equity securities.

Carrying value of marketable and non-marketable equity securities

The carrying value is measured as the total initial cost plus the cumulative net gain (loss). The carrying values for our marketable and non-marketable equity securities are summarized below (in millions):

	As of December 31, 2020		
	Marketable Securities	Non-Marketable Securities	Total
Total initial cost	$ 2,227	$ 14,616	$ 16,843
Cumulative net gain (loss)[(1)]	3,631	4,277	7,908
Carrying value[(2)]	$ 5,858	$ 18,893	$ 24,751

(1) Non-marketable equity securities cumulative net gain (loss) is comprised of $6.1 billion unrealized gains and $1.9 billion unrealized losses (including impairment).
(2) The long-term portion of marketable equity securities of $429 million is included within other non-current assets.

	As of June 30, 2021		
	Marketable Securities[2]	Non-Marketable Securities	Total
Total initial cost	$ 2,662	$ 14,743	$ 17,405
Cumulative net gain (loss)[1]	4,208	8,730	12,938
Carrying value[2]	$ 6,870	$ 23,473	$ 30,343

(1) Non-marketable equity securities cumulative net gain (loss) is comprised of $10.4 billion unrealized gains and $1.7 billion unrealized losses (including impairment).
(2) The long-term portion of marketable equity securities of $591 million is included within other non-current assets.

Marketable equity securities

The following table summarizes marketable equity securities measured at fair value by significant investment categories (in millions):

	As of December 31, 2020		As of June 30, 2021	
	Cash and Cash Equivalents	Marketable Securities	Cash and Cash Equivalents	Marketable Securities
Level 1:				
Money market funds	$ 12,210	$ 0	$ 9,516	$ 0
Marketable equity securities[1][2]	0	5,470	0	6,514
	12,210	5,470	9,516	6,514
Level 2:				
Mutual funds	0	388	0	356
Total	$ 12,210	$ 5,858	$ 9,516	$ 6,870

(1) The balance as of December 31, 2020 and June 30, 2021 includes investments that were reclassified from non-marketable equity securities following the commencement of public market trading of the issuers or acquisition by public entities (certain of which are subject to short-term lock-up restrictions).
(2) As of December 31, 2020 and June 30, 2021 the long-term portion of marketable equity securities of $429 million and $591 million, respectively, is included within other non-current assets.

Non-marketable equity securities

The following is a summary of unrealized gains and losses recorded in other income (expense), net, and included as adjustments to the carrying value of non-marketable equity securities (in millions):

	Three Months Ended June 30,		Six Months Ended June 30,	
	2020	2021	2020	2021
Unrealized gains	$ 189	$ 1,852	$ 545	$ 5,128
Unrealized losses (including impairment)	(98)	(65)	(1,395)	(67)
Total unrealized gain (loss) for non-marketable equity securities	$ 91	$ 1,787	$ (850)	$ 5,061

During the three months ended June 30, 2021, included in the $23.5 billion of non-marketable equity securities, $4.7 billion were measured at fair value primarily based on observable market transactions, resulting in a net unrealized gain of $1.8 billion.

Equity securities accounted for under the Equity Method

As of December 31, 2020 and June 30, 2021, equity securities accounted for under the equity method had a carrying value of approximately $1.4 billion and $1.6 billion, respectively. Our share of gains and losses including impairment are included as a component of other income (expense), net, in the Consolidated Statements of Income. See Note 6 for further details on other income (expense), net.

Derivative Financial Instruments

We enter into derivative instruments to manage risks relating to our ongoing business operations. The primary risk managed with derivative instruments is foreign exchange risk. We use foreign currency contracts to reduce the risk that our cash flows, earnings, and investment in foreign subsidiaries will be adversely affected by foreign currency exchange rate fluctuations. We also enter into derivative instruments to partially offset our exposure to other risks and enhance investment returns.

We recognize derivative instruments as either assets or liabilities in the Consolidated Balance Sheets at fair value and classify the derivatives primarily within Level 2 in the fair value hierarchy. We present our collar contracts (an option strategy comprised of a combination of purchased and written options) at net fair values where both the purchased and written options are with the same counterparty. For other derivative contracts, we present at gross fair values. We primarily record changes in the fair value in the Consolidated Statements of Income as either other income (expense), net, or revenues, or in the Consolidated Balance Sheets in AOCI, as discussed below.

We enter into master netting arrangements, which reduce credit risk by permitting net settlement of transactions with the same counterparty. Further, we enter into collateral security arrangements that provide for collateral to be received or pledged when the net fair value of certain financial instruments fluctuates from contractually established thresholds. Cash collateral received related to derivative instruments under our collateral security arrangements are included in other current assets with a corresponding liability. Cash and non-cash collateral pledged related to derivative instruments under our collateral security arrangements are included in other current assets.

Cash Flow Hedges

We designate foreign currency forward and option contracts (including collars) as cash flow hedges to hedge certain forecasted revenue transactions denominated in currencies other than the U.S. dollar. These contracts have maturities of 24 months or less.

Cash flow hedge amounts included in the assessment of hedge effectiveness are deferred in AOCI and subsequently reclassified to revenue when the hedged item is recognized in earnings. We exclude the change in forward points and time value from our assessment of hedge effectiveness. The initial value of the excluded component is amortized on a straight-line basis over the life of the hedging instrument and recognized in revenues. The difference between fair value changes of the excluded component and the amount amortized to revenues is recorded in AOCI. If the hedged transactions become probable of not occurring, the corresponding amounts in AOCI are reclassified to other income (expense), net in the period of de-designation.

As of June 30, 2021, the net accumulated gain on our foreign currency cash flow hedges before tax effect was $87 million, which is expected to be reclassified from AOCI into earnings within the next 12 months.

Fair Value Hedges

We designate foreign currency forward contracts as fair value hedges to hedge foreign currency risks for our investments denominated in currencies other than the U.S. dollar. Fair value hedge amounts included in the assessment of hedge effectiveness are recognized in other income (expense), net, along with the offsetting gains and losses of the related hedged items. We exclude changes in forward points from the assessment of hedge effectiveness and recognize changes in the excluded component in other income (expense), net.

Net Investment Hedges

We designate foreign currency forward contracts as net investment hedges to hedge the foreign currency risks related to our investment in foreign subsidiaries. Net investment hedge amounts included in the assessment of hedge effectiveness are recognized in AOCI along with the foreign currency translation adjustment. We exclude changes in forward points from the assessment of hedge effectiveness and recognize changes in the excluded component in other income (expense), net.

Other Derivatives

Other derivatives not designated as hedging instruments consist primarily of foreign currency forward contracts that we use to hedge intercompany transactions and other monetary assets or liabilities denominated in currencies other than the functional currency of a subsidiary. Gains and losses on these contracts, as well as the related costs, are recognized in other income (expense), net, along with the foreign currency gains and losses on monetary assets and liabilities.

We also use derivatives not designated as hedging instruments to manage risks relating to interest rates, commodity prices, credit exposures and to enhance investment returns. Additionally, from time to time, we enter into derivatives to hedge the market price risk on certain of our marketable equity securities. Gains (losses) arising from these derivatives are reflected within the "other" component of other income (expense), net and the offsetting recognized gains (losses) on the marketable equity securities are reflected within the gain (loss) on equity securities, net component of other income (expense), net. See Note 6 for further details on other income (expense), net.

The gross notional amounts of our outstanding derivative instruments were as follows (in millions):

	As of December 31, 2020	As of June 30, 2021
Derivatives Designated as Hedging Instruments:		
Foreign exchange contracts		
Cash flow hedges	$ 10,187	$ 15,941
Fair value hedges	$ 1,569	$ 2,578
Net investment hedges	$ 9,965	$ 10,167
Derivatives Not Designated as Hedging Instruments:		
Foreign exchange contracts	$ 39,861	$ 43,795
Other contracts	$ 2,399	$ 2,933

The fair values of our outstanding derivative instruments were as follows (in millions):

		As of December 31, 2020		
	Balance Sheet Location	Fair Value of Derivatives Designated as Hedging Instruments	Fair Value of Derivatives Not Designated as Hedging Instruments	Total Fair Value
Derivative Assets:				
Level 2:				
Foreign exchange contracts	Other current and non-current assets	$ 33	$ 316	$ 349
Other contracts	Other current and non-current assets	0	16	16
Total		$ 33	$ 332	$ 365
Derivative Liabilities:				
Level 2:				
Foreign exchange contracts	Accrued expenses and other liabilities, current and non-current	$ 395	$ 185	$ 580
Other contracts	Accrued expenses and other liabilities, current and non-current	0	942	942
Total		$ 395	$ 1,127	$ 1,522

		As of June 30, 2021		
	Balance Sheet Location	Fair Value of Derivatives Designated as Hedging Instruments	Fair Value of Derivatives Not Designated as Hedging Instruments	Total Fair Value
Derivative Assets:				
Level 2:				
Foreign exchange contracts	Other current and non-current assets	$ 355	$ 115	$ 470
Other contracts	Other current and non-current assets	0	39	39
Total		$ 355	$ 154	$ 509
Derivative Liabilities:				
Level 2:				
Foreign exchange contracts	Accrued expenses and other liabilities, current and non-current	$ 61	$ 201	$ 262
Other contracts	Accrued expenses and other liabilities, current and non-current	0	93	93
Total		$ 61	$ 294	$ 355

The gains (losses) on derivatives in cash flow hedging and net investment hedging relationships recognized in other comprehensive income ("OCI") are summarized below (in millions):

	Gains (Losses) Recognized in OCI on Derivatives Before Tax Effect			
	Three Months Ended June 30,		Six Months Ended June 30,	
	2020	2021	2020	2021
Derivatives in Cash Flow Hedging Relationship:				
Foreign exchange contracts				
Amount included in the assessment of effectiveness	$ (44)	$ (60)	$ 368	$ 102
Amount excluded from the assessment of effectiveness	(49)	(4)	3	45
Derivatives in Net Investment Hedging Relationship:				
Foreign exchange contracts				
Amount included in the assessment of effectiveness	(121)	(179)	(41)	199
Total	$ (214)	$ (243)	$ 330	$ 346

The effect of derivative instruments on income is summarized below (in millions):

	Gains (Losses) Recognized in Income			
	Three Months Ended June 30,			
	2020		2021	
	Revenues	Other income (expense), net	Revenues	Other income (expense), net
Total amounts presented in the Consolidated Statements of Income in which the effects of cash flow and fair value hedges are recorded	$ 38,297	$ 1,894	$ 61,880	$ 2,624
Gains (Losses) on Derivatives in Cash Flow Hedging Relationship:				
Foreign exchange contracts				
Amount of gains (losses) reclassified from AOCI to income	$ 140	$ 0	$ (3)	$ 0
Amount excluded from the assessment of effectiveness recognized in earnings based on an amortization approach	11	0	(4)	0
Gains (Losses) on Derivatives in Fair Value Hedging Relationship:				
Foreign exchange contracts				
Hedged items	0	9	0	28
Derivatives designated as hedging instruments	0	(9)	0	(28)
Amount excluded from the assessment of effectiveness	0	1	0	2
Gains (Losses) on Derivatives in Net Investment Hedging Relationship:				
Foreign exchange contracts				
Amount excluded from the assessment of effectiveness	0	33	0	21
Gains (Losses) on Derivatives Not Designated as Hedging Instruments:				
Foreign exchange contracts	0	(69)	0	(64)
Other Contracts	0	(211)	0	(142)
Total gains (losses)	$ 151	$ (246)	$ (7)	$ (183)

	Gains (Losses) Recognized in Income			
	Six Months Ended June 30,			
	2020		2021	
	Revenues	Other income (expense), net	Revenues	Other income (expense), net
Total amounts presented in the Consolidated Statements of Income in which the effects of cash flow and fair value hedges are recorded	$ 79,456	$ 1,674	$ 117,194	$ 7,470
Gains (Losses) on Derivatives in Cash Flow Hedging Relationship:				
Foreign exchange contracts				
Amount of gains (losses) reclassified from AOCI to income	$ 166	$ 0	$ (108)	$ 0
Amount excluded from the assessment of effectiveness recognized in earnings based on an amortization approach	34	0	(8)	0
Gains (Losses) on Derivatives in Fair Value Hedging Relationship:				
Foreign exchange contracts				
Hedged items	0	(8)	0	28
Derivatives designated as hedging instruments	0	8	0	(28)
Amount excluded from the assessment of effectiveness	0	2	0	4
Gains (Losses) on Derivatives in Net Investment Hedging Relationship:				
Foreign exchange contracts				
Amount excluded from the assessment of effectiveness	0	111	0	41
Gains (Losses) on Derivatives Not Designated as Hedging Instruments:				
Foreign exchange contracts	0	160	0	(404)
Other Contracts	0	(239)	0	181
Total gains (losses)	$ 200	$ 34	$ (116)	$ (178)

Offsetting of Derivatives

The gross amounts of our derivative instruments subject to master netting arrangements with various counterparties, and cash and non-cash collateral received and pledged under such agreements were as follows (in millions):

Offsetting of Assets

	As of December 31, 2020						
				Gross Amounts Not Offset in the Consolidated Balance Sheets, but Have Legal Rights to Offset			
	Gross Amounts of Recognized Assets	Gross Amounts Offset in the Consolidated Balance Sheets	Net Presented in the Consolidated Balance Sheets	Financial Instruments	Cash Collateral Received	Non-Cash Collateral Received	Net Assets Exposed
Derivatives	$ 397	$ (32)	$ 365	$ (295) [1]	$ (16)	$ 0	$ 54

	As of June 30, 2021						
				Gross Amounts Not Offset in the Consolidated Balance Sheets, but Have Legal Rights to Offset			
	Gross Amounts of Recognized Assets	Gross Amounts Offset in the Consolidated Balance Sheets	Net Presented in the Consolidated Balance Sheets	Financial Instruments	Cash Collateral Received	Non-Cash Collateral Received	Net Assets Exposed
Derivatives	$ 554	$ (45)	$ 509	$ (208) [1]	$ (190)	$ 0	$ 111

(1) The balances as of December 31, 2020 and June 30, 2021 were related to derivative liabilities which are allowed to be net settled against derivative assets in accordance with our master netting agreements.

Offsetting of Liabilities

	As of December 31, 2020						
				Gross Amounts Not Offset in the Consolidated Balance Sheets, but Have Legal Rights to Offset			
	Gross Amounts of Recognized Liabilities	Gross Amounts Offset in the Consolidated Balance Sheets	Net Presented in the Consolidated Balance Sheets	Financial Instruments	Cash Collateral Pledged	Non-Cash Collateral Pledged	Net Liabilities
Derivatives	$ 1,554	$ (32)	$ 1,522	$ (295) [2]	$ (1)	$ (943)	$ 283

	As of June 30, 2021						
				Gross Amounts Not Offset in the Consolidated Balance Sheets, but Have Legal Rights to Offset			
	Gross Amounts of Recognized Liabilities	Gross Amounts Offset in the Consolidated Balance Sheets	Net Presented in the Consolidated Balance Sheets	Financial Instruments	Cash Collateral Pledged	Non-Cash Collateral Pledged	Net Liabilities
Derivatives	$ 400	$ (45)	$ 355	$ (208) [2]	$ (2)	$ (86)	$ 59

(2) The balances as of December 31, 2020 and June 30, 2021 were related to derivative assets which are allowed to be net settled against derivative liabilities in accordance with our master netting agreements.

Note 4. Variable Interest Entities

Consolidated VIEs

We consolidate VIEs in which we hold a variable interest and are the primary beneficiary. The results of operations and financial position of these VIEs are included in our consolidated financial statements.

For certain consolidated VIEs, their assets are not available to us and their creditors do not have recourse to us. As of December 31, 2020 and June 30, 2021, assets that can only be used to settle obligations of these VIEs were $5.7 billion and $7.3 billion, respectively. The liabilities for which creditors only have recourse to the VIEs were $2.3 billion for both periods.

Total noncontrolling interests ("NCI"), including redeemable noncontrolling interests ("RNCI"), in our consolidated subsidiaries was $3.9 billion and $4.4 billion as of December 31, 2020 and June 30, 2021, respectively. NCI and RNCI are included within additional paid-in capital. Net loss attributable to noncontrolling interests was not material for any period presented and is included within the "other" component of other income (expense), net. See Note 6 for further details on other income (expense), net.

Waymo

In June 2021, Waymo, a consolidated VIE, completed an investment round with additional funding of $2.5 billion, the majority of which represented investment from Alphabet. The investments from external parties were accounted for as equity transactions and resulted in recognition of noncontrolling interests. Waymo is a self-driving technology development company with a mission to make it safe and easy for people and things to get where they're going.

Unconsolidated VIEs

We have investments in some VIEs in which we are not the primary beneficiary. These VIEs include private companies that are primarily early stage companies and certain renewable energy entities in which activities involve power generation using renewable sources.

We have determined that the governance structures of these entities do not allow us to direct the activities that would significantly affect their economic performance. Therefore, we are not the primary beneficiary, and the results of operations and financial position of these VIEs are not included in our consolidated financial statements. We account for these investments as non-marketable equity investments or equity method investments.

VIEs are generally based on the current carrying value of the investments and any future funding commitments. We have determined that the single source of our exposure to these VIEs is our capital investments in them. The carrying value and maximum exposure of these unconsolidated VIEs were not material as of December 31, 2020 and June 30, 2021.

Note 5. Debt

Short-Term Debt

We have a debt financing program of up to $5.0 billion through the issuance of commercial paper. Net proceeds from this program are used for general corporate purposes. We had no commercial paper outstanding as of December 31, 2020 and June 30, 2021.

Our short-term debt balance also includes the current portion of certain long-term debt.

Long-Term Debt

The total outstanding debt is summarized below (in millions, except percentages):

	Maturity	Coupon Rate	Effective Interest Rate	As of December 31, 2020	As of June 30, 2021
Debt					
2011-2020 Notes Issuances	2024 - 2060	0.45% - 3.38%	0.57% - 3.38%	$ 14,000	$ 13,000
Future finance lease payments, net(1)				1,201	1,608
Total debt				15,201	14,608
Unamortized discount and debt issuance costs				(169)	(163)
Less: Current portion of Notes(2)				(999)	0
Less: Current portion future finance lease payments, net(1)(2)				(101)	(117)
Total long-term debt				$ 13,932	$ 14,328

(1) Net of imputed interest.
(2) Total current portion of long-term debt is included within other accrued expenses and current liabilities. See Note 6.

The notes in the table above are comprised of fixed-rate senior unsecured obligations and generally rank equally with each other. We may redeem the notes at any time in whole or in part at specified redemption prices. The effective interest rates are based on proceeds received with interest payable semi-annually.

The total estimated fair value of the outstanding notes, including the current portion, was approximately $14.0 billion and $12.4 billion as of December 31, 2020 and June 30, 2021, respectively. The fair value was determined based on observable market prices of identical instruments in less active markets and is categorized accordingly as Level 2 in the fair value hierarchy.

Credit Facility

As of June 30, 2021, we have $10.0 billion of revolving credit facilities. No amounts were outstanding under the credit facilities as of December 31, 2020 and June 30, 2021.

In April 2021, we terminated the existing $4.0 billion revolving credit facilities, which were scheduled to expire in July 2023, and entered into two new revolving credit facilities in the amounts of $4.0 billion and $6.0 billion, which will expire in April 2022 and April 2026, respectively. The interest rates for the new credit facilities are determined based on a formula using certain market rates, as well as our progress toward the achievement of certain sustainability goals. No amounts have been borrowed under the new credit facilities.

Note 6. Supplemental Financial Statement Information

Property and Equipment, Net

Property and equipment, net, consisted of the following (in millions):

	As of December 31, 2020	As of June 30, 2021
Land and buildings	$ 49,732	$ 55,910
Information technology assets	45,906	51,188
Construction in progress	23,111	21,825
Leasehold improvements	7,516	7,951
Furniture and fixtures	197	201
Property and equipment, gross	126,462	137,075
Less: accumulated depreciation	(41,713)	(45,378)
Property and equipment, net	$ 84,749	$ 91,697

Accrued expenses and other current liabilities

Accrued expenses and other current liabilities consisted of the following (in millions):

	As of December 31, 2020	As of June 30, 2021
European Commission fines(1)	$ 10,409	$ 10,254
Payables to brokers for unsettled investment trades	754	966
Accrued customer liabilities	3,118	2,865
Accrued purchases of property and equipment	2,197	2,387
Current operating lease liabilities	1,694	2,037
Other accrued expenses and current liabilities	10,459	10,472
Accrued expenses and other current liabilities	$ 28,631	$ 28,981

(1) Includes the effects of foreign exchange and interest. See Note 9 for further details.

Accumulated Other Comprehensive Income (Loss)

The components of AOCI, net of income tax, were as follows (in millions):

	Foreign Currency Translation Adjustments	Unrealized Gains (Losses) on Available-for-Sale Investments	Unrealized Gains (Losses) on Cash Flow Hedges	Total
Balance as of December 31, 2019	$ (2,003)	$ 812	$ (41)	$ (1,232)
Other comprehensive income (loss) before reclassifications	(266)	1,365	289	1,388
Amounts excluded from the assessment of hedge effectiveness recorded in AOCI	0	0	3	3
Amounts reclassified from AOCI	0	(318)	(137)	(455)
Other comprehensive income (loss)	(266)	1,047	155	936
Balance as of June 30, 2020	$ (2,269)	$ 1,859	$ 114	$ (296)

	Foreign Currency Translation Adjustments	Unrealized Gains (Losses) on Available-for-Sale Investments	Unrealized Gains (Losses) on Cash Flow Hedges	Total
Balance as of December 31, 2020	$ (864)	$ 1,612	$ (115)	$ 633
Other comprehensive income (loss) before reclassifications	(57)	(540)	92	(505)
Amounts excluded from the assessment of hedge effectiveness recorded in AOCI	0	0	45	45
Amounts reclassified from AOCI	0	(64)	81	17
Other comprehensive income (loss)	(57)	(604)	218	(443)
Balance as of June 30, 2021	$ (921)	$ 1,008	$ 103	$ 190

The effects on net income of amounts reclassified from AOCI were as follows (in millions):

		Gains (Losses) Reclassified from AOCI to the Consolidated Statements of Income			
		Three Months Ended June 30,		Six Months Ended June 30,	
AOCI Components	Location	2020	2021	2020	2021
Unrealized gains (losses) on available-for-sale investments					
	Other income (expense), net	$ 189	$ 96	$ 403	$ 82
	Benefit (provision) for income taxes	(40)	(21)	(85)	(18)
	Net of income tax	149	75	318	64
Unrealized gains (losses) on cash flow hedges					
Foreign exchange contracts	Revenue	140	(3)	166	(108)
Interest rate contracts	Other income (expense), net	2	2	3	3
	Benefit (provision) for income taxes	(27)	5	(32)	24
	Net of income tax	115	4	137	(81)
Total amount reclassified, net of income tax		$ 264	$ 79	$ 455	$ (17)

Other Income (Expense), Net

The components of other income (expense), net, were as follows (in millions):

	Three Months Ended June 30,		Six Months Ended June 30,	
	2020	2021	2020	2021
Interest income	$ 433	$ 389	$ 1,019	$ 734
Interest expense[1]	(13)	(76)	(34)	(152)
Foreign currency exchange gain (loss), net	(92)	(51)	(173)	62
Gain (loss) on debt securities, net	387	111	399	25
Gain (loss) on equity securities, net	1,455	2,772	641	7,609
Performance fees	(75)	(523)	(69)	(1,188)
Income (loss) and impairment from equity method investments, net	(54)	92	20	97
Other	(147)	(90)	(129)	283
Other income (expense), net	$ 1,894	$ 2,624	$ 1,674	$ 7,470

(1) Interest expense is net of interest capitalized of $57 million and $45 million for the three months ended June 30, 2020 and 2021, respectively, and $109 million and $92 million for the six months ended June 30, 2020 and 2021, respectively.

Note 7. Acquisitions

Fitbit

In January 2021, we closed the acquisition of Fitbit, Inc. for $2.1 billion. The addition of Fitbit to Google Services is expected to help spur innovation in wearable devices.

The assets acquired and liabilities assumed were recorded at fair value. The purchase price excludes post acquisition compensation arrangements. The purchase price was attributed to $440 million cash acquired, $590 million of intangible assets, $1.2 billion of goodwill and $92 million of net liabilities assumed. Goodwill was recorded in the Google Services segment and primarily attributable to synergies expected to arise after the acquisition. Goodwill is not expected to be deductible for tax purposes.

Note 8. Goodwill and Other Intangible Assets

Goodwill

Changes in the carrying amount of goodwill for the six months ended June 30, 2021 were as follows (in millions):

	Google Services	Google Cloud	Other Bets	Total
Balance as of December 31, 2020	$ 18,517	$ 1,957	$ 701	$ 21,175
Acquisitions	1,221	5	1	1,227
Foreign currency translation and other adjustments	13	1	(10)	4
Balance as of June 30, 2021	$ 19,751	$ 1,963	$ 692	$ 22,406

Other Intangible Assets

Information regarding purchased intangible assets were as follows (in millions):

	As of December 31, 2020		
	Gross Carrying Amount	Accumulated Amortization	Net Carrying Amount
Patents and developed technology	$ 4,639	$ 3,649	$ 990
Customer relationships	266	49	217
Trade names and other	699	461	238
Total	$ 5,604	$ 4,159	$ 1,445

	As of June 30, 2021		
	Gross Carrying Amount	Accumulated Amortization	Net Carrying Amount
Patents and developed technology	$ 4,824	$ 3,927	$ 897
Customer relationships	464	93	371
Trade names and other	861	503	358
Total	$ 6,149	$ 4,523	$ 1,626

For all intangible assets acquired and purchased during the six months ended June 30, 2021, patents and developed technology have a weighted-average useful life of 4.0 years, customer relationships have a weighted-average useful life of 3.8 years, and trade names and other have a weighted-average useful life of 10.0 years.

Amortization expense relating to purchased intangible assets was $194 million and $215 million for the three months ended June 30, 2020 and 2021, respectively, and $398 million and $432 million for the six months ended June 30, 2020 and 2021, respectively.

As of June 30, 2021, expected amortization expense relating to purchased intangible assets for each of the next five years and thereafter was as follows (in millions):

Remainder of 2021	$ 430
2022	507
2023	226
2024	197
2025	74
Thereafter	192
Total	$ 1,626

Note 9. Contingencies

Indemnifications

In the normal course of business, including to facilitate transactions in our services and products and corporate activities, we indemnify certain parties, including advertisers, Google Network partners, customers of Google Cloud offerings, lessors, and service providers with respect to certain matters. We have agreed to hold certain parties harmless against losses arising from a breach of representations or covenants, or out of intellectual property infringement or other claims made against certain parties. Several of these agreements limit the time within which an indemnification claim can be made and the amount of the claim. In addition, we have entered into indemnification agreements with our officers and directors, and our bylaws contain similar indemnification obligations to our agents.

It is not possible to make a reasonable estimate of the maximum potential amount under these indemnification agreements due to the unique facts and circumstances involved in each particular agreement. Additionally, we have a limited history of prior indemnification claims and the payments we have made under such agreements have not had a material adverse effect on our results of operations, cash flows, or financial position. However, to the extent that valid indemnification claims arise in the future, future payments by us could be significant and could have a material adverse effect on our results of operations or cash flows in a particular period.

As of June 30, 2021, we did not have any material indemnification claims that were probable or reasonably possible.

Legal Matters

Antitrust Investigations

On November 30, 2010, the EC's Directorate General for Competition opened an investigation into various antitrust-related complaints against us.

On June 27, 2017, the EC announced its decision that certain actions taken by Google regarding its display and ranking of shopping search results and ads infringed European competition law. The EC decision imposed a €2.4 billion ($2.7 billion as of June 27, 2017) fine. On September 11, 2017, we appealed the EC decision and on September 27, 2017, we implemented product changes to bring shopping ads into compliance with the EC's decision. We recognized a charge of $2.7 billion for the fine in the second quarter of 2017.

On July 18, 2018, the EC announced its decision that certain provisions in Google's Android-related distribution agreements infringed European competition law. The EC decision imposed a €4.3 billion ($5.1 billion as of June 30, 2018) fine and directed the termination of the conduct at issue. On October 9, 2018, we appealed the EC decision. On October 29, 2018, we implemented changes to certain of our Android distribution practices. We recognized a charge of $5.1 billion for the fine in the second quarter of 2018.

On March 20, 2019, the EC announced its decision that certain contractual provisions in agreements that Google had with AdSense for Search partners infringed European competition law. The EC decision imposed a fine of €1.5 billion ($1.7 billion as of March 20, 2019) and directed actions related to AdSense for Search partners' agreements, which we implemented prior to the decision. On June 4, 2019, we appealed the EC decision. We recognized a charge of $1.7 billion for the fine in the first quarter of 2019.

While each EC decision is under appeal, we included the fines in accrued expenses and other current liabilities on our Consolidated Balance Sheets as we provided bank guarantees (in lieu of a cash payment) for the fines.

From time to time we are subject to formal and informal inquiries and investigations on competition matters by regulatory authorities in the United States, Europe, and other jurisdictions. In August 2019, we began receiving civil investigative demands from the U.S. Department of Justice ("DOJ") requesting information and documents relating to our prior antitrust investigations and certain aspects of our business. The DOJ and a number of state Attorneys General filed a lawsuit on October 20, 2020 alleging that Google violated U.S. antitrust laws relating to Search and Search advertising. Separately, on December 16, 2020, a number of state Attorneys General filed an antitrust complaint against Google in the United States District Court for the Eastern District of Texas, alleging that Google violated U.S. antitrust laws as well as state deceptive trade laws relating to its advertising technology. On June 22, 2021, the EC opened a formal investigation into Google's advertising technology business practices. On July 7, 2021, a number of state Attorneys General filed an antitrust complaint against us in the United States District Court for the Northern District of California, alleging that Google's operation of Android and Google Play violated U.S. antitrust laws and state antitrust and consumer protection laws. We believe these complaints are without merit and will defend ourselves vigorously. The DOJ and state Attorneys General continue their investigations into certain aspects of our business. We continue to cooperate with federal and state regulators in the United States, the EC, and other regulators around the world.

Patent and Intellectual Property Claims

We have had patent, copyright, trade secret, and trademark infringement lawsuits filed against us claiming that certain of our products, services, and technologies infringe others' intellectual property rights. Adverse results in these lawsuits may include awards of substantial monetary damages, costly royalty or licensing agreements, or orders preventing us from offering certain features, functionalities, products, or services. As a result, we may have to change our business practices, and develop non-infringing products or technologies, which could result in a loss of revenues for us and otherwise harm our business. In addition, the U.S. International Trade Commission ("ITC") has increasingly become an important forum to litigate intellectual property disputes because an ultimate loss in an ITC action can result in a prohibition on importing infringing products into the U.S. Because the U.S. is an important market, a prohibition on importation could have an adverse effect on us, including preventing us from importing many important products into the U.S. or necessitating workarounds that may limit certain features of our products.

Furthermore, many of our agreements with our customers and partners require us to indemnify them against certain intellectual property infringement claims, which would increase our costs as a result of defending such claims, and may require that we pay significant damages if there were an adverse ruling in any such claims. In addition, our customers and partners may discontinue the use of our products, services, and technologies, as a result of injunctions or otherwise, which could result in loss of revenues and adversely affect our business.

In 2010, Oracle America, Inc. ("Oracle") brought a copyright lawsuit against Google in the Northern District of California, alleging that Google's Android operating system infringes Oracle's copyrights related to certain Java application programming interfaces ("Java APIs"). After trial, final judgment was entered by the district court in favor of Google on June 8, 2016, and the court decided post-trial motions in favor of Google. Oracle appealed and on March 27, 2018, the Federal Circuit Court of Appeals reversed and remanded the case for a trial on damages. On May 29, 2018, we filed a petition for a rehearing at the Federal Circuit, and on August 28, 2018, the Federal Circuit denied the petition. On January 24, 2019, we filed a petition to the Supreme Court of the United States to review the case. On April 29, 2019, the Supreme Court requested the views of the Solicitor General regarding our petition. On September 27, 2019, the Solicitor General recommended denying our petition, and we provided our response on October 16, 2019. On November 15, 2019, the Supreme Court granted our petition and made a decision to review the case. The Supreme Court heard oral arguments in our case on October 7, 2020. On April 5, 2021, the Supreme Court reversed the Federal Circuit's ruling and found that Google's use of the Java APIs was a fair use as a matter

of law. The Supreme Court remanded the case to the Federal Circuit for further proceedings in conformity with the Supreme Court opinion. On May 14, 2021, the Federal Circuit entered an order affirming the district court's final judgment in favor of Google. On June 21, 2021, the Federal Circuit issued a mandate returning the case to the district court, and the case is now concluded.

Other

We are also regularly subject to claims, suits, regulatory and government investigations, and other proceedings involving competition, intellectual property, privacy, tax and related compliance, labor and employment, commercial disputes, content generated by our users, goods and services offered by advertisers or publishers using our platforms, personal injury, consumer protection, and other matters. Such claims, suits, regulatory and government investigations, and other proceedings could result in substantial fines and penalties, injunctive relief, ongoing auditing and monitoring obligations, changes to our products and services, alterations to our business models and operations, and collateral related civil litigation or other adverse consequences, all of which could harm our business, reputation, financial condition, and operating results.

Certain of these outstanding matters include speculative, substantial or indeterminate monetary amounts. We record a liability when we believe that it is probable that a loss has been incurred and the amount can be reasonably estimated. If we determine that a loss is reasonably possible and the loss or range of loss can be estimated, we disclose the reasonably possible loss. We evaluate developments in our legal matters that could affect the amount of liability that has been previously accrued, and the matters and related reasonably possible losses disclosed, and make adjustments as appropriate. Significant judgment is required to determine both likelihood of there being and the estimated amount of a loss related to such matters.

With respect to our outstanding matters, based on our current knowledge, we believe that the amount or range of reasonably possible loss will not, either individually or in aggregate, have a material adverse effect on our business, consolidated financial position, results of operations, or cash flows. However, the outcome of such matters is inherently unpredictable and subject to significant uncertainties.

We expense legal fees in the period in which they are incurred.

Non-Income Taxes

We are under audit by various domestic and foreign tax authorities with regards to non-income tax matters. The subject matter of non-income tax audits primarily arises from disputes on the tax treatment and tax rate applied to the sale of our products and services in these jurisdictions and the tax treatment of certain employee benefits. We accrue non-income taxes that may result from examinations by, or any negotiated agreements with, these tax authorities when a loss is probable and reasonably estimable. If we determine that a loss is reasonably possible and the loss or range of loss can be estimated, we disclose the reasonably possible loss. Due to the inherent complexity and uncertainty of these matters and judicial process in certain jurisdictions, the final outcome may be materially different from our expectations.

For information regarding income tax contingencies, see Note 13.

Note 10. Stockholders' Equity

Share Repurchases

In July 2020, the Board of Directors of Alphabet authorized the company to repurchase up to $28.0 billion of its Class C capital stock, which was completed during the second quarter of 2021. In April 2021, the Board of Directors of Alphabet authorized the company to repurchase up to an additional $50.0 billion of its Class C capital stock. In July 2021, the Alphabet board approved an amendment to the April 2021 authorization, permitting the company to repurchase both Class A and Class C shares in a manner deemed in the best interest of the company and its stockholders, taking into account the economic cost and prevailing market conditions, including the relative trading prices and volumes of the Class A and Class C shares. As of June 30, 2021, $43.5 billion remains available for repurchase. The repurchases are being executed from time to time, subject to general business and market conditions and other investment opportunities, through open market purchases or privately negotiated transactions, including through Rule 10b5-1 plans. The repurchase program does not have an expiration date.

During the three and six months ended June 30, 2021, we repurchased and subsequently retired 5.4 million and 11.1 million shares of Alphabet Class C capital stock for an aggregate amount of $12.8 billion and $24.2 billion, respectively.

Note 11. Net Income Per Share

The following table sets forth the computation of basic and diluted net income per share of Class A and Class B common stock and Class C capital stock (in millions, except share amounts which are reflected in thousands, and per share amounts):

	Three Months Ended June 30,					
	2020			2021		
	Class A	Class B	Class C	Class A	Class B	Class C
Basic net income per share:						
Numerator						
Allocation of undistributed earnings	$ 3,055	$ 473	$ 3,431	$ 8,321	$ 1,265	$ 8,939
Denominator						
Number of shares used in per share computation	299,308	46,355	336,105	300,485	45,692	322,781
Basic net income per share	$ 10.21	$ 10.21	$ 10.21	$ 27.69	$ 27.69	$ 27.69
Diluted net income per share:						
Numerator						
Allocation of undistributed earnings for basic computation	$ 3,055	$ 473	$ 3,431	$ 8,321	$ 1,265	$ 8,939
Reallocation of undistributed earnings as a result of conversion of Class B to Class A shares	473	0	0	1,265	0	0
Reallocation of undistributed earnings	(26)	(3)	26	(149)	(19)	149
Allocation of undistributed earnings	$ 3,502	$ 470	$ 3,457	$ 9,437	$ 1,246	$ 9,088
Denominator						
Number of shares used in basic computation	299,308	46,355	336,105	300,485	45,692	322,781
Weighted-average effect of dilutive securities						
Add:						
Conversion of Class B to Class A common shares outstanding	46,355	0	0	45,692	0	0
Restricted stock units and other contingently issuable shares	92	0	5,164	15	0	10,639
Number of shares used in per share computation	345,755	46,355	341,269	346,192	45,692	333,420
Diluted net income per share	$ 10.13	$ 10.13	$ 10.13	$ 27.26	$ 27.26	$ 27.26

	Six Months Ended June 30,					
	2020			2021		
	Class A	Class B	Class C	Class A	Class B	Class C
Basic net income per share:						
Numerator						
Allocation of undistributed earnings	$ 6,042	$ 935	$ 6,818	$ 16,330	$ 2,485	$ 17,640
Denominator						
Number of shares used in per share computation	299,642	46,383	338,092	300,610	45,742	324,737
Basic net income per share	$ 20.16	$ 20.16	$ 20.16	$ 54.32	$ 54.32	$ 54.32
Diluted net income per share:						
Numerator						
Allocation of undistributed earnings for basic computation	$ 6,042	$ 935	$ 6,818	$ 16,330	$ 2,485	$ 17,640
Reallocation of undistributed earnings as a result of conversion of Class B to Class A shares	935	0	0	2,485	0	0
Reallocation of undistributed earnings	(53)	(7)	53	(269)	(36)	269
Allocation of undistributed earnings	$ 6,924	$ 928	$ 6,871	$ 18,546	$ 2,449	$ 17,909
Denominator						
Number of shares used in basic computation	299,642	46,383	338,092	300,610	45,742	324,737
Weighted-average effect of dilutive securities						
Add:						
Conversion of Class B to Class A common shares outstanding	46,383	0	0	45,742	0	0
Restricted stock units and other contingently issuable shares	135	0	5,394	17	0	9,736
Number of shares used in per share computation	346,160	46,383	343,486	346,369	45,742	334,473
Diluted net income per share	$ 20.00	$ 20.00	$ 20.00	$ 53.54	$ 53.54	$ 53.54

For the periods presented above, the net income per share amounts are the same for Class A and Class B common stock and Class C capital stock because the holders of each class are entitled to equal per share dividends or distributions in liquidation in accordance with the Amended and Restated Certificate of Incorporation of Alphabet Inc.

Note 12. Compensation Plans

Stock-Based Compensation

For the three months ended June 30, 2020 and 2021, total stock-based compensation ("SBC") expense was $3.5 billion and $4.0 billion, including amounts associated with awards we expect to settle in Alphabet stock of $3.3 billion and $3.7 billion, respectively. For the six months ended June 30, 2020 and 2021, total SBC expense was $6.8 billion and $7.8 billion, including amounts associated with awards we expect to settle in Alphabet stock of $6.5 billion and $7.4 billion, respectively.

Stock-Based Award Activities

The following table summarizes the activities for our unvested restricted stock units ("RSUs") in Alphabet stock for the six months ended June 30, 2021:

	Unvested Restricted Stock Units	
	Number of Shares	Weighted-Average Grant-Date Fair Value
Unvested as of December 31, 2020	19,288,793	$ 1,262.13
Granted	9,082,093	$ 1,810.91
Vested	(5,491,338)	$ 1,315.93
Forfeited/canceled	(973,555)	$ 1,396.04
Unvested as of June 30, 2021	21,905,993	$ 1,475.11

As of June 30, 2021, there was $30.6 billion of unrecognized compensation cost related to unvested employee RSUs. This amount is expected to be recognized over a weighted-average period of 2.7 years.

Note 13. Income Taxes

The following table presents our provision for income taxes (in millions, except for effective tax rate):

	Three Months Ended June 30,		Six Months Ended June 30,	
	2020	2021	2020	2021
Provision for income taxes	$ 1,318	$ 3,460	$ 2,239	$ 6,813
Effective tax rate	15.9 %	15.7 %	14.0 %	15.7 %

We are subject to income taxes in the U.S. and foreign jurisdictions. Significant judgment is required in evaluating our uncertain tax positions and determining our provision for income taxes. Our total gross unrecognized tax benefits were $3.8 billion and $4.6 billion as of December 31, 2020 and June 30, 2021, respectively. Our total unrecognized tax benefits that, if recognized, would affect our effective tax rate were $2.6 billion and $3.2 billion as of December 31, 2020 and June 30, 2021, respectively. Although the timing of the resolution, settlement, and closure of audits is not certain, we do not believe it is reasonably possible that our unrecognized tax benefits will materially change in the next 12 months.

For information regarding non-income taxes, see Note 9.

Note 14. Information about Segments and Geographic Areas

Beginning in the fourth quarter of 2020, we report our segment results as Google Services, Google Cloud, and Other Bets:

- Google Services includes products and services such as ads, Android, Chrome, hardware, Google Maps, Google Play, Search, and YouTube. Google Services generates revenues primarily from advertising; sales of apps, in-app purchases, digital content products, and hardware; and fees received for subscription-based products such as YouTube Premium and YouTube TV.
- Google Cloud includes Google's infrastructure and data analytics platforms, collaboration tools, and other services for enterprise customers. Google Cloud generates revenues primarily from fees received for Google Cloud Platform services and Google Workspace collaboration tools.
- Other Bets is a combination of multiple operating segments that are not individually material. Revenues from the Other Bets are derived primarily through the sale of internet services as well as licensing and R&D services.

Revenues and certain costs, such as costs associated with content and traffic acquisition, certain engineering, and hardware costs and other operating expenses, are directly attributable to our segments. Due to the integrated nature of Alphabet, other costs and expenses, such as technical infrastructure and office facilities, are managed centrally at a consolidated level. The associated costs, including depreciation and impairment, are allocated to operating segments as a service cost generally based on usage or headcount.

Unallocated corporate costs primarily include corporate initiatives, corporate shared costs, such as finance and legal, including certain fines and settlements, as well as costs associated with certain shared research and development activities. Additionally, hedging gains (losses) related to revenue are included in corporate costs.

Our Chief Operating Decision Maker does not evaluate operating segments using asset information.

Information about segments during the periods presented were as follows (in millions). For comparative purposes, amounts in prior periods have been recast:

	Three Months Ended June 30,		Six Months Ended June 30,	
	2020	2021	2020	2021
Revenues:				
Google Services	$ 34,991	$ 57,067	$ 73,189	$ 108,245
Google Cloud	3,007	4,628	5,784	8,675
Other Bets	148	192	283	390
Hedging gains (losses)	151	(7)	200	(116)
Total revenues	$ 38,297	$ 61,880	$ 79,456	$ 117,194

	Three Months Ended June 30,		Six Months Ended June 30,	
	2020	2021	2020	2021
Operating income (loss):				
Google Services	$ 9,539	$ 22,343	$ 21,087	$ 41,889
Google Cloud	(1,426)	(591)	(3,156)	(1,565)
Other Bets	(1,116)	(1,398)	(2,237)	(2,543)
Corporate costs, unallocated	(614)	(993)	(1,334)	(1,983)
Total income from operations	$ 6,383	$ 19,361	$ 14,360	$ 35,798

For revenues by geography, see Note 2.

The following table presents our long-lived assets by geographic area, which includes property and equipment, net and operating lease assets (in millions):

	As of December 31, 2020	As of June 30, 2021
Long-lived assets:		
United States	$ 69,315	$ 74,993
International	27,645	29,682
Total long-lived assets	$ 96,960	$ 104,675

ITEM 2. MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS

Please read the following discussion and analysis of our financial condition and results of operations together with our consolidated financial statements and related notes included under Part I, Item 1 of this Quarterly Report on Form 10-Q.

The Impact of COVID-19 on our Results and Operations

We began to observe the impact of COVID-19 on our financial results in March 2020 when, despite an increase in users' search activity, our advertising revenues declined compared to the prior year due to a shift of user search activity to less commercial topics and reduced spending by our advertisers. For the quarter ended June 30, 2020, our advertising revenues declined due to the continued impacts of COVID-19 and the related reductions in global economic activity. During the course of the quarter ended June 30, 2020, we observed a gradual return in user search activity to more commercial topics, followed by increased spending by our advertisers that continued throughout the second half of 2020. Additionally, over the course of 2020, we experienced variability in our margins as many of our expenses are less variable in nature and/or may not correlate to changes in revenues. Market volatility contributed to fluctuations in the valuation of our equity investments. Further, our assessment of the credit deterioration of our customers due to changes in the macroeconomic environment during the period was reflected in our allowance for credit losses for accounts receivable.

During the first half of 2021, we continued to benefit from elevated consumer activity online and broad-based increases in advertiser spending. We remained focused on innovating and investing in the services we offer to consumers and businesses to support our long-term growth. For example, we continued to invest in our technical infrastructure and data centers. Additionally, our margins benefited from revenue growth while many of our expenses remained less variable in nature and/or may not correlate to changes in revenues. These factors, combined with the adverse impact of COVID-19 in the prior year, particularly during the quarter ended June 30, 2020, positively affected year-over-year growth trends. Further, year-over-year trends benefited from a reduction in depreciation expense due to the change in the estimated useful life of our servers and certain network equipment beginning in the first quarter of 2021; we expect the effect of this change in estimate to decline through the remainder of the year (for further details see Note 1 of the Notes to Consolidated Financial Statements included in Part 1, Item 1 of this Quarterly Report on Form 10-Q). The COVID-19 pandemic continues to evolve, be unpredictable and affect our business and financial results. Our past results may not be indicative of our future performance, and historical trends in our financial results may differ materially.

See Part II Item 7, "Impact of COVID-19" in our Annual Report on Form 10-K for the year ended December 31, 2020 for more information.

Executive Overview

The following table summarizes our consolidated financial results (in millions, except for per share information and percentages).

	Three Months Ended June 30,	
	2020	2021
Revenues	$ 38,297	$ 61,880
Change in revenues year over year	(2)%	62 %
Change in constant currency revenues year over year	0 %	57 %
Operating income	$ 6,383	$ 19,361
Operating margin	17 %	31 %
Other income (expense), net	$ 1,894	$ 2,624
Net Income	$ 6,959	$ 18,525
Diluted EPS	$ 10.13	$ 27.26

- Total revenues were $61.9 billion, an increase of 62% year over year, primarily driven by an increase in Google Services segment revenues of $22.1 billion or 63% and an increase in Google Cloud segment revenues of $1.6 billion or 54%. The adverse effect of COVID-19 on the prior year comparable period's advertising revenues contributed to the year-over-year increase. Revenues from the United States, EMEA, APAC, and Other Americas were $28.2 billion, $19.1 billion, $11.2 billion, and $3.4 billion, respectively.
- Total cost of revenues was $26.2 billion, an increase of 41% year over year. TAC was $10.9 billion, an increase of 63% year over year, primarily driven by an increase in revenues subject to TAC. Other cost of revenues were $15.3 billion, an increase of 29% year over year, affected by a reduction in depreciation expense due to the change in the estimated useful life of our servers and certain network equipment.
- Operating expenses (excluding cost of revenues) were $16.3 billion, an increase of 22% year over year, primarily driven by headcount growth and increases in advertising and promotional expenses as well as charges related to legal matters.

Other information

- Operating cash flow was $21.9 billion for the three months ended June 30, 2021.
- Capital expenditures, which primarily included investments in technical infrastructure, were $5.5 billion for the three months ended June 30, 2021.
- Number of employees was 144,056 as of June 30, 2021.

Our Segments

Beginning in the fourth quarter of 2020, we report our segment results as Google Services, Google Cloud, and Other Bets:

- Google Services includes products and services such as ads, Android, Chrome, hardware, Google Maps, Google Play, Search, and YouTube. Google Services generates revenues primarily from advertising; sales of apps, in-app purchases, digital content products, and hardware; and fees received for subscription-based products such as YouTube Premium and YouTube TV.
- Google Cloud includes Google's infrastructure and data analytics platforms, collaboration tools, and other services for enterprise customers. Google Cloud generates revenues primarily from fees received for Google Cloud Platform ("GCP") services and Google Workspace collaboration tools.
- Other Bets is a combination of multiple operating segments that are not individually material. Revenues from the Other Bets are derived primarily through the sale of internet services as well as licensing and R&D services.

Unallocated corporate costs primarily include corporate initiatives, corporate shared costs, such as finance and legal, including certain fines and settlements, as well as costs associated with certain shared research and development activities. Additionally, hedging gains (losses) related to revenue are included in corporate costs.

Financial Results

Revenues

The following table presents our revenues by type (in millions).

	Three Months Ended June 30,		Six Months Ended June 30,	
	2020	2021	2020	2021
Google Search & other	$ 21,319	$ 35,845	$ 45,821	$ 67,724
YouTube ads	3,812	7,002	7,850	13,007
Google Network	4,736	7,597	9,959	14,397
Google advertising	29,867	50,444	63,630	95,128
Google other	5,124	6,623	9,559	13,117
Google Services total	34,991	57,067	73,189	108,245
Google Cloud	3,007	4,628	5,784	8,675
Other Bets	148	192	283	390
Hedging gains (losses)	151	(7)	200	(116)
Total revenues	$ 38,297	$ 61,880	$ 79,456	$ 117,194

Google Services

Google advertising revenues

Our advertising revenue growth, as well as the change in paid clicks and cost-per-click on Google Search & other properties and the change in impressions and cost-per-impression on Google Network partners' properties ("Google Network properties") and the correlation between these items, have been affected and may continue to be affected by various factors, including:

- advertiser competition for keywords;
- changes in advertising quality, formats, delivery or policy;
- changes in device mix;
- changes in foreign currency exchange rates;
- fees advertisers are willing to pay based on how they manage their advertising costs;
- general economic conditions including the impact of COVID-19;
- seasonality; and
- traffic growth in emerging markets compared to more mature markets and across various advertising verticals and channels.

Our advertising revenue growth rate has been affected over time as a result of a number of factors, including challenges in maintaining our growth rate as revenues increase to higher levels; changes in our product mix; changes in advertising quality or formats and delivery; the evolution of the online advertising market; increasing competition; our investments in new business strategies; query growth rates; and shifts in the geographic mix of our revenues. We also expect that our revenue growth rate will continue to be affected by evolving user preferences, the acceptance by users of our products and services as they are delivered on diverse devices and modalities, our ability to create a seamless experience for both users and advertisers, and movements in foreign currency exchange rates.

Google advertising revenues consist primarily of the following:

- Google Search & other consists of revenues generated on Google search properties (including revenues from traffic generated by search distribution partners who use Google.com as their default search in browsers, toolbars, etc.) and other Google owned and operated properties like Gmail, Google Maps, and Google Play;
- YouTube ads consists of revenues generated on YouTube properties; and
- Google Network consists of revenues generated on Google Network properties participating in AdMob, AdSense, and Google Ad Manager.

Google Search & other

Google Search & other revenues increased $14.5 billion and $21.9 billion from the three and six months ended June 30, 2020 to the three and six months ended June 30, 2021, respectively. The increase was primarily driven by a number of interrelated factors as well as the adverse effect of COVID-19 on the prior year comparable period. The interrelated factors included increases in search queries resulting from growth in user adoption and usage, primarily on mobile devices, growth in advertiser spending, and improvements we have made in ad formats and delivery. The adverse effect of COVID-19 on prior year comparable period revenues included a shift in user activity to less commercial topics and reduced advertiser spend.

YouTube ads

YouTube ads revenues increased $3.2 billion from the three months ended June 30, 2020 to the three months ended June 30, 2021, driven by growth for our brand and direct response advertising products. The increase in revenues of $5.2 billion from the six months ended June 30, 2020 to the six months ended June 30, 2021 was driven by our direct response and brand advertising products. Growth for our brand advertising products was driven by both increased spending by our advertisers in the current period and the adverse effect of COVID-19 on prior year comparable period revenues. Growth for our direct response advertising products was primarily driven by increased advertiser spending as well as improvements to ad formats and delivery.

Google Network

Google Network revenues increased $2.9 billion and $4.4 billion from the three and six months ended June 30, 2020 to the three and six months ended June 30, 2021, respectively. The increase was primarily driven by strength in Google Ad Manager and AdMob. The increase was also affected by reduced advertiser spending driven by the effect of COVID-19 in the prior year comparable period.

Use of Monetization Metrics

Paid clicks for our Google Search & other properties represent engagement by users and include clicks on advertisements by end-users on Google search properties and other owned and operated properties including Gmail, Google Maps, and Google Play. Historically, we included certain viewed YouTube engagement ads and the related revenues in our paid clicks and cost-per-click monetization metrics. Over time, advertising on YouTube has expanded to multiple advertising formats and the type of viewed engagement ads historically included in paid clicks and cost-per-click metrics have increasingly covered a smaller portion of YouTube advertising revenues. As a result, beginning in the fourth quarter of 2020, we removed these ads and the related revenues from the paid clicks and cost-per-click metrics. The revised metrics presented below provide a better understanding of monetization trends on the properties included within Google Search & other, as they now more closely correlate with the related changes in revenues.

Impressions for Google Network properties include impressions displayed to users served on Google Network properties participating primarily in AdMob, AdSense and Google Ad Manager.

Cost-per-click is defined as click-driven revenues divided by our total number of paid clicks and represents the average amount we charge advertisers for each engagement by users.

Cost-per-impression is defined as impression-based and click-based revenues divided by our total number of impressions and represents the average amount we charge advertisers for each impression displayed to users.

As our business evolves, we periodically review, refine and update our methodologies for monitoring, gathering, and counting the number of paid clicks on our Google Search & other properties and the number of impressions on Google Network properties and for identifying the revenues generated by click activity on our Google Search & other properties and the revenues generated by impression activity on Google Network properties.

Paid clicks and cost-per-click

The following table presents changes in our paid clicks and cost-per-click (expressed as a percentage):

	Three Months Ended June 30,	Six Months Ended June 30,
	2021	2021
Paid clicks change	26 %	25 %
Cost-per-click change	31 %	16 %

Paid clicks increased from the three and six months ended June 30, 2020 to the three and six months ended June 30, 2021 primarily driven by a number of interrelated factors, including an increase in search queries resulting from growth in user adoption and usage, primarily on mobile devices; an increase in clicks relating to ads on Google Play; continued growth in advertiser activity; improvements we have made in ad formats and delivery; and the adverse effect of COVID-19 on the prior year comparable period when we experienced a shift to less commercial search activity and a reduction in advertiser spending. The increase in cost-per-click was primarily driven by the adverse effect of COVID-19 on the prior year comparable period as well as the effect of a combination of factors including changes in device mix, geographic mix, ongoing product changes, product mix, property mix, and fluctuations of the U.S. dollar compared to certain foreign currencies.

Impressions and cost-per-impression

The following table presents changes in our impressions and cost-per-impression (expressed as a percentage):

	Three Months Ended June 30,	Six Months Ended June 30,
	2021	2021
Impressions change	(1)%	3 %
Cost-per-impression change	63 %	39 %

Impressions decreased from the three months ended June 30, 2020 to the three months ended June 30, 2021 primarily driven by a decline in impressions related to AdSense, partially offset by growth in AdMob. Impressions increased from the six months ended June 30, 2020 to the six months ended June 30, 2021 primarily driven by growth in AdMob and Google Ad Manager, partially offset by a decline in impressions related to AdSense.

The increase in cost-per-impression from the three and six months ended June 30, 2020 to the three and six months ended June 30, 2021 was primarily driven by the adverse effect of COVID-19 on the prior year comparable period when we experienced a reduction in advertiser spending as well as the effect of a combination of factors including ongoing product and policy changes and improvements we have made in ad formats and delivery, changes in device mix, geographic mix, product mix, property mix, and fluctuations of the U.S. dollar compared to certain foreign currencies.

Google other revenues

Google other revenues consist primarily of revenues from:

- Google Play, which includes revenues from sales of apps and in-app purchases (which we recognize net of payout to developers) and digital content sold in the Google Play store;
- Devices and Services which includes hardware, such as Fitbit wearable devices, Google Nest home products, Pixelbooks, Pixel phones and other devices;
- YouTube non-advertising, including YouTube Premium and YouTube TV subscriptions and other services; and
- other products and services.

Google other revenues increased $1.5 billion and $3.6 billion from the three and six months ended June 30, 2020 to the three and six months ended June 30, 2021, respectively. The growth was primarily driven by YouTube non-advertising, Devices and Services and Google Play. Growth for YouTube non-advertising was primarily driven by an increase in paid subscribers. Growth for Devices and Services reflects the inclusion of Fitbit revenues, as the acquisition closed in January 2021. Growth for Google Play was primarily driven by sales of apps and in-app purchases.

Over time, our growth rate for Google other revenues may be affected by the seasonality associated with new product and service launches as well as market dynamics.

Google Cloud

Our Google Cloud revenues increased $1.6 billion and $2.9 billion from the three and six months ended June 30, 2020 to the three and six months ended June 30, 2021, respectively. The growth was primarily driven by GCP followed by Google Workspace offerings. Google Cloud's infrastructure and platform services were the largest drivers of growth in GCP.

Over time, our growth rate for Google Cloud revenues may be affected by customer usage, market dynamics, as well as new product and service launches.

Revenues by Geography

The following table presents our revenues by geography as a percentage of revenues, determined based on the addresses of our customers:

	Three Months Ended June 30,		Six Months Ended June 30,	
	2020	2021	2020	2021
United States	47 %	46 %	47 %	45 %
EMEA	30 %	31 %	30 %	31 %
APAC	18 %	18 %	18 %	19 %
Other Americas	5 %	5 %	5 %	5 %

For further details on revenues by geography, see Note 2 of the Notes to Consolidated Financial Statements included in Part I, Item 1 of this Quarterly Report on Form 10-Q.

Use of Constant Currency Revenues and Constant Currency Revenue Percentage Change

The effect of currency exchange rates on our business is an important factor in understanding period to period comparisons. Our international revenues are favorably affected as the U.S. dollar weakens relative to other foreign currencies, and unfavorably affected as the U.S. dollar strengthens relative to other foreign currencies. Our revenues are also favorably affected by net hedging gains and unfavorably affected by net hedging losses.

We use non-GAAP constant currency revenues and non-GAAP percentage change in constant currency revenues for financial and operational decision-making and as a means to evaluate period-to-period comparisons. We believe the presentation of results on a constant currency basis in addition to GAAP results helps improve the ability to understand our performance because they exclude the effects of foreign currency volatility that are not indicative of our core operating results.

Constant currency information compares results between periods as if exchange rates had remained constant period over period. We define constant currency revenues as total revenues excluding the effect of foreign exchange rate movements and hedging activities, and use it to determine the constant currency revenue percentage change on a year-over-year basis. Constant currency revenues are calculated by translating current period revenues using prior period exchange rates, as well as excluding any hedging effects realized in the current period.

Constant currency revenue percentage change is calculated by determining the change in current period revenues over prior period revenues where current period foreign currency revenues are translated using prior period exchange rates and hedging effects are excluded from revenues of both periods.

These results should be considered in addition to, not as a substitute for, results reported in accordance with GAAP. Results on a constant currency basis, as we present them, may not be comparable to similarly titled measures used by other companies and are not a measure of performance presented in accordance with GAAP.

The following table presents the foreign exchange effect on our international revenues and total revenues (in millions, except percentages):

	Three Months Ended June 30,		Six Months Ended June 30,	
	2020	2021	2020	2021
EMEA revenues	$ 11,363	$ 19,084	$ 24,208	$ 36,115
Exclude foreign exchange effect on current period revenues using prior year rates	361	(1,425)	596	(2,354)
EMEA constant currency revenues	$ 11,724	$ 17,659	$ 24,804	$ 33,761
Prior period EMEA revenues	$ 12,313	$ 11,363	$ 23,981	$ 24,208
EMEA revenue percentage change	(8)%	68 %	1 %	49 %
EMEA constant currency revenue percentage change	(5)%	55 %	3 %	39 %
APAC revenues	$ 6,945	$ 11,231	$ 14,183	$ 21,686
Exclude foreign exchange effect on current period revenues using prior year rates	105	(350)	166	(713)
APAC constant currency revenues	$ 7,050	$ 10,881	$ 14,349	$ 20,973
Prior period APAC revenues	$ 6,536	$ 6,945	$ 12,632	$ 14,183
APAC revenue percentage change	6 %	62 %	12 %	53 %
APAC constant currency revenue percentage change	8 %	57 %	14 %	48 %
Other Americas revenues	$ 1,839	$ 3,364	$ 3,996	$ 6,269
Exclude foreign exchange effect on current period revenues using prior year rates	240	(112)	336	79
Other Americas constant currency revenues	$ 2,079	$ 3,252	$ 4,332	$ 6,348
Prior period Other Americas revenues	$ 2,124	$ 1,839	$ 4,030	$ 3,996
Other Americas revenue percentage change	(13)%	83 %	(1)%	57 %
Other Americas constant currency revenue percentage change	(2)%	77 %	7 %	59 %
United States revenues	$ 17,999	$ 28,208	$ 36,869	$ 53,240
United States revenue percentage change	1 %	57 %	7 %	44 %
Hedging gains (losses)	$ 151	$ (7)	$ 200	$ (116)
Total revenues	$ 38,297	$ 61,880	$ 79,456	$ 117,194
Total constant currency revenues	$ 38,852	$ 60,000	$ 80,354	$ 114,322
Prior period revenues, excluding hedging effect[(1)]	$ 38,836	$ 38,146	$ 75,038	$ 79,256
Total revenue percentage change	(2)%	62 %	6 %	47 %
Total constant currency revenue percentage change	0 %	57 %	7 %	44 %

(1) Total revenues and hedging gains (losses) were $38,944 million and $108 million, respectively, for the three months ended June 30, 2019 and $75,283 million and $245 million, respectively, for the six months ended June 30, 2019.

EMEA revenue percentage change from the three and six months ended June 30, 2020 to the three and six months ended June 30, 2021 was favorably affected by foreign currency exchange rates, primarily due to the U.S. dollar weakening relative to the Euro and British pound.

APAC revenue percentage change from the three and six months ended June 30, 2020 to the three and six months ended June 30, 2021 was favorably affected by foreign currency exchange rates, primarily due to the U.S. dollar weakening relative to the Australian dollar.

Other Americas revenue percentage change from the three months ended June 30, 2020 to the three months ended June 30, 2021 was favorably affected by changes in foreign currency exchange rates, primarily due to the

U.S. dollar weakening relative to the Canadian dollar. Other Americas revenue percentage change from the six months ended June 30, 2020 to the six months ended June 30, 2021 was unfavorably affected by changes in foreign currency exchange rates, primarily due to the U.S. dollar strengthening relative to the Brazilian real, partially offset by the U.S. dollar weakening relative to the Canadian dollar.

Costs and Operating Expenses

Cost of Revenues

Cost of revenues includes TAC which are paid to our distribution partners, who make available our search access points and services, and amounts paid to Google Network partners primarily for ads displayed on their properties. Our distribution partners include browser providers, mobile carriers, original equipment manufacturers, and software developers.

The cost of revenues as a percentage of revenues generated from ads placed on Google Network properties are significantly higher than the cost of revenues as a percentage of revenues generated from ads placed on Google properties (which includes Google Search & other and YouTube ads), because most of the advertiser revenues from ads served on Google Network properties are paid as TAC to our Google Network partners.

Additionally, other cost of revenues (which is the cost of revenues excluding TAC) includes the following:

- Content acquisition costs primarily related to payments to content providers from whom we license video and other content for distribution on YouTube advertising and subscription services and Google Play (we pay fees to these content providers based on revenues generated or a flat fee);
- Expenses associated with our data centers (including bandwidth, compensation expenses including SBC, depreciation, energy, and other equipment costs) as well as other operations costs (such as content review and customer support costs). These costs are generally less variable in nature and may not correlate with related changes in revenues; and
- Inventory related costs for hardware we sell.

The following tables present our cost of revenues, including TAC (in millions, except percentages):

	Three Months Ended June 30,		Six Months Ended June 30,	
	2020	2021	2020	2021
TAC	$ 6,694	$ 10,929	$ 14,146	$ 20,641
Other cost of revenues	11,859	15,298	23,389	29,689
Total cost of revenues	$ 18,553	$ 26,227	$ 37,535	$ 50,330
Total cost of revenues as a percentage of revenues	48.4 %	42.4 %	47.2 %	42.9 %

Cost of revenues increased $7.7 billion from the three months ended June 30, 2020 to the three months ended June 30, 2021. The increase was due to increases in TAC and other cost of revenues of $4.2 billion and $3.4 billion, respectively. Cost of revenues increased $12.8 billion from the six months ended June 30, 2020 to the six months ended June 30, 2021. The increase was due to increases in TAC and other cost of revenues of $6.5 billion and $6.3 billion, respectively.

The increase in other cost of revenues from the three and six months ended June 30, 2020 to the three and six months ended June 30, 2021 was primarily due to increases in content acquisition costs primarily for YouTube as well as data center and other operations costs. The increase in data center and other operations costs was partially offset by a reduction in depreciation expense due to the change in the estimated useful life of our servers and certain network equipment beginning in the first quarter of 2021.

The increase in TAC from the three and six months ended June 30, 2020 to the three and six months ended June 30, 2021 was due to increases in TAC paid to distribution partners and to Google Network partners, primarily driven by growth in revenues subject to TAC.

The TAC rate decreased from 22.4% to 21.7% from the three months ended June 30, 2020 to the three months ended June 30, 2021 and decreased from 22.2% to 21.7% from the six months ended June 30, 2020 to the six months ended June 30, 2021 primarily due to a revenue mix shift from Google Network properties to Google properties. The TAC rate on Google properties revenues and the TAC rate on Google Network properties revenues were both substantially consistent from the three and six months ended June 30, 2020 to the three and six months ended June 30, 2021.

Over time, cost of revenues as a percentage of total revenues may be affected by a number of factors, including the following:

- The amount of TAC paid to distribution partners, which is affected by changes in device mix, geographic mix, partner mix, partner agreement terms such as revenue share arrangements, and the percentage of queries channeled through paid access points;
- The amount of TAC paid to Google Network partners, which is affected by a combination of factors such as geographic mix, product mix, and revenue share terms;
- Relative revenue growth rates of Google properties and Google Network properties;
- Certain costs that are less variable in nature and may not correlate with the related revenues;
- Costs associated with our data centers and other operations to support ads, Google Cloud, Search, YouTube and other products;
- Content acquisition costs, which are primarily affected by the relative growth rates in our YouTube advertising and subscription revenues;
- Costs related to hardware sales; and
- Increased proportion of non-advertising revenues, which generally have higher costs of revenues, relative to our advertising revenues.

Research and Development

The following table presents our R&D expenses (in millions, except percentages):

	Three Months Ended June 30,		Six Months Ended June 30,	
	2020	2021	2020	2021
Research and development expenses	$ 6,875	$ 7,675	$ 13,695	$ 15,160
Research and development expenses as a percentage of revenues	18.0 %	12.4 %	17.2 %	12.9 %

R&D expenses consist primarily of:

- Compensation expenses (including SBC) for engineering and technical employees responsible for R&D of our existing and new products and services;
- Depreciation;
- Equipment-related expenses; and
- Professional services fees primarily related to consulting and outsourcing services.

R&D expenses increased $800 million from the three months ended June 30, 2020 to the three months ended June 30, 2021. The increase was primarily due to an increase in compensation expenses of $836 million, largely resulting from a 12% increase in headcount.

R&D expenses increased $1.5 billion from the six months ended June 30, 2020 to the six months ended June 30, 2021. The increase was primarily due to an increase in compensation expenses of $1.7 billion, largely resulting from a 10% increase in headcount. This increase was partially offset by a reduction in depreciation expense of $315 million including the effect of our change in the estimated useful life of our servers and certain network equipment.

Over time, R&D expenses as a percentage of revenues may fluctuate due to certain expenses that are generally less variable in nature and may not correlate to the changes in revenues. In addition, R&D expenses may be affected by a number of factors including continued investment in ads, Android, Chrome, Google Cloud, Google Maps, Google Play, hardware, machine learning, Other Bets, Search and YouTube.

Sales and Marketing

The following table presents our sales and marketing expenses (in millions, except percentages):

	Three Months Ended June 30,		Six Months Ended June 30,	
	2020	2021	2020	2021
Sales and marketing expenses	$ 3,901	$ 5,276	$ 8,401	$ 9,792
Sales and marketing expenses as a percentage of revenues	10.2 %	8.5 %	10.6 %	8.4 %

Sales and marketing expenses consist primarily of:

- Advertising and promotional expenditures related to our products and services; and
- Compensation expenses (including SBC) for employees engaged in sales and marketing, sales support, and certain customer service functions.

Sales and marketing expenses increased $1.4 billion from the three months ended June 30, 2020 to the three months ended June 30, 2021, primarily driven by an increase in advertising and promotional activities of $808 million and compensation expenses of $496 million. The increase in advertising and promotional activities was largely affected by reduced spending in the prior year comparable period as a result of COVID-19. The increase in compensation expenses was largely due to a 13% increase in headcount.

Sales and marketing expenses increased $1.4 billion from the six months ended June 30, 2020 to the six months ended June 30, 2021, primarily driven by an increase in compensation expenses of $864 million and advertising and promotional activities of $672 million. The increase in compensation expenses was largely due to an 11% increase in headcount. The increase in advertising and promotional activities was largely affected by reduced spending in the prior year comparable period as a result of COVID-19.

Over time, sales and marketing expenses as a percentage of revenues may fluctuate due to certain expenses that are generally less variable in nature and may not correlate to the changes in revenues. In addition, sales and marketing expenses may be affected by a number of factors including the seasonality associated with new product and service launches and strategic decisions regarding the timing and extent of our spending.

General and Administrative

The following table presents our general and administrative expenses (in millions, except percentages):

	Three Months Ended June 30,		Six Months Ended June 30,	
	2020	**2021**	**2020**	**2021**
General and administrative expenses	$ 2,585	$ 3,341	$ 5,465	$ 6,114
General and administrative expenses as a percentage of revenues	6.7 %	5.4 %	6.9 %	5.2 %

General and administrative expenses consist primarily of:

- Compensation expenses (including SBC) for employees in our finance, human resources, information technology, and legal organizations;
- Depreciation;
- Equipment-related expenses;
- Legal-related expenses; and
- Professional services fees primarily related to audit, information technology consulting, outside legal, and outsourcing services.

General and administrative expenses increased $756 million from the three months ended June 30, 2020 to the three months ended June 30, 2021. The increase was primarily driven by a $796 million increase in charges relating to legal matters. The increase was partially offset by a $246 million decline in allowance for credit losses for accounts receivable.

General and administrative expenses increased $649 million from the six months ended June 30, 2020 to the six months ended June 30, 2021. The increase was primarily driven by a $1.0 billion increase in charges relating to legal matters. The increase was partially offset by a $739 million decline in allowance for credit losses for accounts receivable, as the prior year comparable period reflected a higher allowance related to the economic impact of COVID-19.

Over time, general and administrative expenses as a percentage of revenues may fluctuate due to certain expenses that are generally less variable in nature and may not correlate to the changes in revenues, the effect of discrete items such as legal settlements, or allowances for credit losses for accounts receivable.

Segment Profitability

The following table presents our segment operating income (loss) (in millions).

	Three Months Ended June 30,		Six Months Ended June 30,	
	2020	2021	2020	2021
Operating income (loss):				
Google Services	$ 9,539	$ 22,343	$ 21,087	$ 41,889
Google Cloud	(1,426)	(591)	(3,156)	(1,565)
Other Bets	(1,116)	(1,398)	(2,237)	(2,543)
Corporate costs, unallocated	(614)	(993)	(1,334)	(1,983)
Total income from operations	$ 6,383	$ 19,361	$ 14,360	$ 35,798

Google Services

Google Services operating income increased $12.8 billion from the three months ended June 30, 2020 to the three months ended June 30, 2021. The increase was due to growth in revenues partially offset by increases in TAC, content acquisition costs, as well as charges related to certain legal matters and compensation expenses. The increase in expenses was partially offset by a reduction in costs driven by the change in the estimated useful life of our servers and certain network equipment. The adverse effect of COVID-19 on the prior year comparable period results positively affected the year-over-year increase in operating income.

Google Services operating income increased $20.8 billion from the six months ended June 30, 2020 to the six months ended June 30, 2021. The increase was due to growth in revenues partially offset by increases in TAC, content acquisition costs, compensation expenses and charges related to certain legal matters. The increase in expenses was partially offset by a reduction in costs driven by the change in the estimated useful life of our servers and certain network equipment. The adverse effect of COVID-19 on prior year comparable period results positively affected the year-over-year increase in operating income.

Google Cloud

Google Cloud operating loss decreased $835 million and $1.6 billion from the three and six months ended June 30, 2020 to the three and six months ended June 30, 2021, respectively. The decrease in operating loss was primarily driven by growth in revenues, partially offset by an increase in expenses, primarily driven by compensation expenses. The increase in expenses was partially offset by a reduction in costs driven by the change in the estimated useful life of our servers and certain network equipment.

Other Bets

Other Bets operating loss increased $282 million and $306 million from the three and six months ended June 30, 2020 to the three and six months ended June 30, 2021, respectively. The increase in operating loss was primarily driven by increases in valuation-based compensation charges.

Other Income (Expense), Net

The following table presents other income (expense), net (in millions):

	Three Months Ended June 30,		Six Months Ended June 30,	
	2020	2021	2020	2021
Other income (expense), net	$ 1,894	$ 2,624	$ 1,674	$ 7,470

Other income (expense), net, increased $730 million from the three months ended June 30, 2020 to the three months ended June 30, 2021. The change was primarily driven by an increase in unrealized gains recognized for our non-marketable equity securities of $1.7 billion during the three months ended June 30, 2021, partially offset by a decrease in net unrealized gains recognized for our marketable equity securities of $499 million and an increase in accrued performance fees of $448 million.

Other income (expense), net, increased $5.8 billion from the six months ended June 30, 2020 to the six months ended June 30, 2021. The change was primarily driven by increases in net unrealized gains recognized for our marketable and non-marketable equity securities of $784 million, $5.9 billion, respectively, during the six months ended June 30, 2021, partially offset by an increase in accrued performance fees of $1.1 billion.

Over time, other income (expense), net, may be affected by market dynamics and other factors. Equity values generally change daily for marketable equity securities and upon the occurrence of observable price changes or upon impairment of non-marketable equity securities. Changes in our share of gains and losses in equity method investments may fluctuate. In addition, volatility in the global economic climate and financial markets could result in a significant change in the value of our investments. Fluctuations in the value of these investments has, and we expect will continue to, contribute to volatility of OI&E in future periods. For additional information about our investments, see Note 3 of the Notes to Consolidated Financial Statements included in Part I, Item 1 of this Quarterly Report on Form 10-Q.

Provision for Income Taxes

The following table presents our provision for income taxes (in millions, except for effective tax rate):

	Three Months Ended June 30,		Six Months Ended June 30,	
	2020	2021	2020	2021
Provision for income taxes	$ 1,318	$ 3,460	$ 2,239	$ 6,813
Effective tax rate	15.9 %	15.7 %	14.0 %	15.7 %

Our effective tax rate was substantially consistent from the three months ended June 30, 2020 to the three months ended June 30, 2021. The change in the effective tax rate was primarily due to an increase in the stock-based compensation related tax benefit and a discrete impact from the initial establishment of a valuation allowance in 2020 for our net deferred tax assets that are not likely to be realized relating to certain of our Other Bets, largely offset by an increase in pre-tax earnings, including in countries that have higher statutory rates.

Our provision for income taxes increased from the three months ended June 30, 2020 to the three months ended June 30, 2021. The increase in the provision for income taxes was primarily due to an increase in pre-tax earnings, including in countries that have higher statutory rates, partially offset by an increase in the stock-based compensation related tax benefit and a discrete impact from the initial establishment of a valuation allowance in 2020 for our net deferred tax assets that are not likely to be realized relating to certain of our Other Bets.

Our provision for income taxes and our effective tax rate increased from the six months ended June 30, 2020 to the six months ended June 30, 2021. The increase in the provision for income taxes and our effective tax rate was primarily due to an increase in pre-tax earnings, including in countries that have higher statutory rates, partially offset by an increase in the U.S. federal Foreign-Derived Intangible Income tax deduction benefit and the stock-based compensation related tax benefit.

We expect our future effective tax rate to be affected by changes in pre-tax earnings, including the effect of countries with different statutory rates. Additionally, our future effective tax rate may be affected by changes in the valuation of our deferred tax assets or liabilities, or changes in tax laws or regulations, as well as certain discrete items.

Financial Condition

Cash, Cash Equivalents, and Marketable Securities

As of June 30, 2021, we had $135.9 billion in cash, cash equivalents, and short-term marketable securities. Cash equivalents and marketable securities are comprised of time deposits, money market funds, highly liquid government bonds, corporate debt securities, mortgage-backed and asset-backed securities and marketable equity securities.

Sources, Uses of Cash and Related Trends

Our principal sources of liquidity are our cash, cash equivalents, and marketable securities, as well as the cash flow that we generate from our operations. The primary use of capital continues to be to invest for the long-term growth of the business. We regularly evaluate our cash and capital structure, including the size, pace and form of capital return to stockholders.

The following table presents our cash flows (in millions):

	Six Months Ended June 30, 2020	Six Months Ended June 30, 2021
Net cash provided by operating activities	$ 25,444	$ 41,179
Net cash used in investing activities	$ (10,295)	$ (14,457)
Net cash used in financing activities	$ (15,684)	$ (29,597)

Cash Provided by Operating Activities

Our largest source of cash provided by our operations are advertising revenues generated by Google Search & other properties, Google Network properties and YouTube ads. Additionally, we generate cash through sales of apps, in-app purchases, digital content products, and hardware; and licensing and service fees including fees received for Google Cloud offerings and subscription-based products.

Our primary uses of cash from our operating activities include payments to our distribution and Google Network partners, for compensation and related costs, and for content acquisition costs. In addition, uses of cash from operating activities include hardware inventory costs, income taxes, and other general corporate expenditures.

Net cash provided by operating activities increased from the six months ended June 30, 2020 to the six months ended June 30, 2021 primarily due to the net effect of increases in cash received from revenues and cash paid for cost of revenues and operating expenses, and changes in operating assets and liabilities, including the timing of income tax payments.

Cash Used in Investing Activities

Cash provided by investing activities consists primarily of maturities and sales of our investments in marketable and non-marketable securities. Cash used in investing activities consists primarily of purchases of marketable and non-marketable securities, purchases of property and equipment, and payments for acquisitions.

Net cash used in investing activities increased from the six months ended June 30, 2020 to the six months ended June 30, 2021 primarily due to a net decrease in maturities and sales of securities and increase in payments for acquisitions.

Cash Used in Financing Activities

Cash provided by financing activities consists primarily of proceeds from issuance of debt and proceeds from the sale of interest in consolidated entities. Cash used in financing activities consists primarily of repurchases of capital stock, net payments related to stock-based award activities, and repayments of debt.

Net cash used in financing activities increased from the six months ended June 30, 2020 to the six months ended June 30, 2021 primarily due to increases in cash payments for repurchases of capital stock, net payments related to stock-based award activities and repayment of debt, and a decrease in proceeds from the sale of interest in consolidated entities.

Liquidity and Material Cash Requirements

We expect existing cash, cash equivalents, short-term marketable securities, cash flows from operations and financing activities to continue to be sufficient to fund our operating activities and cash commitments for investing and financing activities for at least the next 12 months and thereafter for the foreseeable future.

As of June 30, 2021, we had long-term taxes payable of $5.7 billion related to a one-time transition tax payable incurred as a result of the U.S. Tax Cuts and Jobs Act ("Tax Act"). As permitted by the Tax Act, we will pay the transition tax in annual interest-free installments through 2025.

In 2017, 2018 and 2019, the EC announced decisions that certain actions taken by Google infringed European competition law and imposed fines of €2.4 billion ($2.7 billion as of June 27, 2017), €4.3 billion ($5.1 billion as of June 30, 2018), and €1.5 billion ($1.7 billion as of March 20, 2019), respectively. While each EC decision is under appeal, we included the fines in accrued expenses and other current liabilities on our Consolidated Balance Sheets as we provided bank guarantees (in lieu of a cash payment) for the fines.

We have a short-term debt financing program of up to $5.0 billion through the issuance of commercial paper. Net proceeds from this program are used for general corporate purposes. As of June 30, 2021, we had no commercial paper outstanding. As of June 30, 2021, we had $10.0 billion of revolving credit facilities with no amounts outstanding. In April 2021, we terminated the existing revolving credit facilities, which were scheduled to expire in July 2023, and entered into two new revolving credit facilities in the amounts of $4.0 billion and $6.0 billion, which will expire in April 2022 and April 2026, respectively. The interest rates for the new credit facilities are determined based on a formula using certain market rates, as well as our progress toward the achievement of certain sustainability goals. No amounts have been borrowed under the new credit facilities.

As of June 30, 2021, we have senior unsecured notes outstanding due from 2024 through 2060 with a total carrying value of $12.8 billion. Refer to Note 5 of the Notes to Consolidated Financial Statements included in Part I, Item 1 of this Quarterly Report on Form 10-Q for further information on the notes.

In accordance with the authorizations of the Board of Directors of Alphabet, during the six months ended June 30, 2021, we repurchased and subsequently retired 11.1 million shares of Alphabet Class C capital stock for an aggregate amount of $24.2 billion, respectively. In April 2021, the Board of Directors of Alphabet authorized the company to repurchase up to an additional $50.0 billion of its Class C capital stock. In July 2021, the Alphabet board approved an amendment to the April 2021 authorization, permitting the company to repurchase both Class A and Class C shares in a manner deemed in the best interest of the company and its stockholders, taking into account the economic cost and prevailing market conditions, including the relative trading prices and volumes of the Class A and Class C shares. As of June 30, 2021, $43.5 billion remains authorized and available for repurchase. The repurchases are being executed from time to time, subject to general business and market conditions and other investment opportunities, through open market purchases or privately negotiated transactions, including through Rule 10b5-1 plans. The repurchase program does not have an expiration date. Refer to Note 10 of the Notes to Consolidated Financial Statements included in Part I, Item 1 of this Quarterly Report on Form 10-Q.

Capital Expenditures and Leases

We make investments in land and buildings for data centers and offices and information technology assets through purchases of property and equipment and lease arrangements to provide capacity for the growth of our services and products.

During the six months ended June 30, 2020 and 2021, we spent $11.4 billion and $11.4 billion on capital expenditures and recognized total operating lease assets of $1.4 billion and $1.6 billion, respectively. As of June 30, 2021, the amount of total future lease payments under operating leases, which had a weighted average remaining lease term of 9 years, was $15.8 billion. As of June 30, 2021, we have entered into leases that have not yet commenced with future lease payments of $7.4 billion, excluding purchase options, that are not yet recorded on our Consolidated Balance Sheets. These leases will commence between 2021 and 2026 with non-cancelable lease terms of 1 to 25 years.

For the six months ended June 30, 2020 and 2021, our depreciation and impairment expenses on property and equipment were $6.1 billion and $5.3 billion, respectively. The change in estimated useful life of our servers and certain network equipment was effective beginning in fiscal year 2021. The effect of this change in accounting estimate was a reduction in depreciation expense of $1.6 billion for the six months ended June 30, 2021. For the six months ended June 30, 2020 and 2021, our operating lease expenses (including variable lease costs), were $1.4 billion and $1.6 billion, respectively. Finance leases were not material for the six months ended June 30, 2020 and 2021.

Critical Accounting Policies and Estimates

See Part II, Item 7, "Critical Accounting Policies and Estimates" in our Annual Report on Form 10-K for the year ended December 31, 2020. There have been no material changes to our critical accounting policies and estimates since our Annual Report on Form 10-K for the year ended December 31, 2020.

Available Information

Our website is located at www.abc.xyz, and our investor relations website is located at www.abc.xyz/investor. Our Annual Reports on Form 10-K, Quarterly Reports on Form 10-Q, Current Reports on Form 8-K, and our Proxy Statements, and any amendments to these reports, are available through our investor relations website, free of charge, after we file them with the SEC. We also provide a link to the section of the SEC's website at www.sec.gov that has all of the reports that we file or furnish with the SEC.

We webcast via our investor relations website our earnings calls and certain events we participate in or host with members of the investment community. Our investor relations website also provides notifications of news or announcements regarding our financial performance and other items of interest to our investors, including SEC filings, investor events, press and earnings releases, and blogs. We also share Google news and product updates on Google’s Keyword blog at https://www.blog.google/, which may be of interest or material to our investors. Further, corporate governance information, including our certificate of incorporation, bylaws, governance guidelines,

board committee charters, and code of conduct, is also available on our investor relations website under the heading "Other." The content of our websites are not incorporated by reference into this Quarterly Report on Form 10-Q or in any other report or document we file with the SEC, and any references to our websites are intended to be inactive textual references only.

ITEM 3. QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK

We are exposed to financial market risks, including changes in foreign currency exchange rates, interest rates and equity investment risks. Our exposure to market risk has not changed materially since December 31, 2020. For quantitative and qualitative disclosures about market risk, refer to Part II, Item 7A, Quantitative and Qualitative Disclosures About Market Risk, in our Annual Report on Form 10-K for the year ended December 31, 2020.

ITEM 4. CONTROLS AND PROCEDURES

Evaluation of Disclosure Controls and Procedures

Our management, with the participation of our chief executive officer and chief financial officer, evaluated the effectiveness of our disclosure controls and procedures pursuant to Rule 13a-15 under the Exchange Act, as of the end of the period covered by this Quarterly Report on Form 10-Q.

Based on this evaluation, our chief executive officer and chief financial officer concluded that, as of June 30, 2021, our disclosure controls and procedures are designed at a reasonable assurance level and are effective to provide reasonable assurance that information we are required to disclose in reports that we file or submit under the Exchange Act is recorded, processed, summarized, and reported within the time periods specified in the SEC’s rules and forms, and that such information is accumulated and communicated to our management, including our chief executive officer and chief financial officer, as appropriate, to allow timely decisions regarding required disclosure.

Changes in Internal Control over Financial Reporting

We rely extensively on information systems to manage our business and summarize and report operating results. In 2019, we began a multi-year implementation of a new global enterprise resource planning ("ERP") system, which will replace much of our existing core financial systems. The ERP system is designed to accurately maintain our financial records, enhance the flow of financial information, improve data management and provide timely information to our management team. The implementation is expected to continue in phases over the next few years. During the quarter ended June 30, 2021, we completed the implementation of certain of our subledgers, which included changes to our financial close processes, procedures and internal controls over financial reporting. As we continue with our phased implementation, we will evaluate quarterly whether such changes materially affect our internal control over financial reporting.

Other than the implementation of the subledgers as described above, there were no changes in our internal control over financial reporting that occurred during the quarter ended June 30, 2021 that have materially affected, or are reasonably likely to materially affect, our internal control over financial reporting.

As a result of COVID-19, our global workforce continued to operate primarily in a work from home environment for the quarter ended June 30, 2021. While we continue to evolve our work model in response to the uneven effects of the ongoing pandemic around the world, we believe that our internal controls over financial reporting continue to be effective. We have continued to re-evaluate and refine our financial reporting process to provide reasonable assurance that we could report our financial results accurately and timely.

Limitations on Effectiveness of Controls and Procedures

In designing and evaluating the disclosure controls and procedures, management recognizes that any controls and procedures, no matter how well designed and operated, can provide only reasonable assurance of achieving the desired control objectives. In addition, the design of disclosure controls and procedures must reflect the fact that there are resource constraints and that management is required to apply its judgment in evaluating the benefits of possible controls and procedures relative to their costs.

PART II. OTHER INFORMATION

ITEM 1. LEGAL PROCEEDINGS

For a description of our material pending legal proceedings, see Note 9 “Contingencies - Legal Matters” of the Notes to Consolidated Financial Statements included in Part I, Item 1 of this Quarterly Report on Form 10-Q, which is incorporated herein by reference.

ITEM 1A. RISK FACTORS

Our operations and financial results are subject to various risks and uncertainties, including those described in Part I, Item 1A, "Risk Factors" in our Annual Report on Form 10-K for the year ended December 31, 2020, which could adversely affect our business, financial condition, results of operations, cash flows, and the trading price of our common and capital stock. Below are changes to our risk factors since our Annual Report on Form 10-K for the year ended December 31, 2020.

We cannot guarantee that any share repurchase program will be fully consummated or will enhance long-term stockholder value, and share repurchases could increase the volatility of our stock prices and could diminish our cash reserves.

We engage in share repurchases of our Class A and Class C stock from time to time in accordance with authorizations from the Board of Directors of Alphabet. Our repurchase program does not have an expiration date and does not obligate Alphabet to repurchase any specific dollar amount or to acquire any specific number of shares. Further, our share repurchases could affect our share trading prices, increase their volatility, reduce our cash reserves and may be suspended or terminated at any time, which may result in a decrease in the trading prices of our stock.

The concentration of our stock ownership limits our stockholders’ ability to influence corporate matters.

Our Class B common stock has 10 votes per share, our Class A common stock has one vote per share, and our Class C capital stock has no voting rights. As of June 30, 2021, Larry Page and Sergey Brin beneficially owned approximately 85.3% of our outstanding Class B common stock, which represented approximately 51.5% of the voting power of our outstanding common stock. Through their stock ownership, Larry and Sergey have significant influence over all matters requiring stockholder approval, including the election of directors and significant corporate transactions, such as a merger or other sale of our company or our assets, for the foreseeable future. In addition, because our Class C capital stock carries no voting rights (except as required by applicable law), the issuance of the Class C capital stock, including in future stock-based acquisition transactions and to fund employee equity incentive programs, could continue Larry and Sergey’s current relative voting power and their ability to elect all of our directors and to determine the outcome of most matters submitted to a vote of our stockholders. The share repurchases made pursuant to our repurchase program may also affect Larry and Sergey’s relative voting power. This concentrated control limits or severely restricts other stockholders’ ability to influence corporate matters and we may take actions that some of our stockholders do not view as beneficial, which could reduce the market price of our Class A common stock and our Class C capital stock.

ITEM 2. UNREGISTERED SALES OF EQUITY SECURITIES AND USE OF PROCEEDS

Issuer Purchases of Equity Securities

The following table presents information with respect to Alphabet's repurchases of Class C capital stock during the quarter ended June 30, 2021.

Period	Total Number of Shares Purchased (in thousands) [(1)]	Average Price Paid per Share [(2)]	Total Number of Shares Purchased as Part of Publicly Announced Programs (in thousands) [(1)]	Approximate Dollar Value of Shares that May Yet Be Purchased Under the Program (in millions)
April 1 - 30	1,599	$ 2,279.07	1,599	$ 52,605
May 1 - 31	1,918	$ 2,351.68	1,918	$ 48,095
June 1 - 30	1,859	$ 2,496.57	1,859	$ 43,454
Total	5,376		5,376	

(1) The repurchases are being executed from time to time, subject to general business and market conditions and other investment opportunities, through open market purchases or privately negotiated transactions, including through Rule 10b5-1 plans. The repurchase program does not have an expiration date. See Note 10 in Part I, Item 1 of this Quarterly Report on Form 10-Q for additional information related to share repurchases.

(2) Average price paid per share includes costs associated with the repurchases.

ITEM 6. EXHIBITS

Exhibit Number		Description	Incorporated by reference herein	
			Form	Date
10.01		Alphabet Inc. 2021 Stock Plan	Current Report on Form 8-K (File No. 001-37580)	June 4, 2021
10.01.1	*	Alphabet Inc. 2021 Stock Plan - Form of Alphabet Restricted Stock Unit Agreement		
10.01.2	*	Alphabet Inc. 2021 Stock Plan - Form of Alphabet Non-CEO Performance Stock Unit Agreement		
31.01	*	Certification of Chief Executive Officer pursuant to Exchange Act Rules 13a-14(a) and 15d-14(a), as adopted pursuant to Section 302 of the Sarbanes-Oxley Act of 2002		
31.02	*	Certification of Chief Financial Officer pursuant to Exchange Act Rules 13a-14(a) and 15d-14(a), as adopted pursuant to Section 302 of the Sarbanes-Oxley Act of 2002		
32.01	‡	Certifications of Chief Executive Officer and Chief Financial Officer pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002		
101.INS	*	Inline XBRL Instance Document - the instance document does not appear in the Interactive Data File because its XBRL tags are embedded within the Inline XBRL document		
101.SCH	*	Inline XBRL Taxonomy Extension Schema Document		
101.CAL	*	Inline XBRL Taxonomy Extension Calculation Linkbase Document		
101.DEF	*	Inline XBRL Taxonomy Extension Definition Linkbase Document		
101.LAB	*	Inline XBRL Taxonomy Extension Label Linkbase Document		
101.PRE	*	Inline XBRL Taxonomy Extension Presentation Linkbase Document		
104		Cover Page Interactive Data File (formatted as Inline XBRL and contained in Exhibit 101)		

Indicates management compensatory plan, contract, or arrangement.

* Filed herewith.

‡ Furnished herewith.

SIGNATURE

Pursuant to the requirements of the Securities Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned thereunto duly authorized.

	ALPHABET INC.
July 27, 2021	By: /s/ RUTH M. PORAT
	Ruth M. Porat
	Senior Vice President and Chief Financial Officer
	ALPHABET INC.
July 27, 2021	By: /s/ AMIE THUENER O'TOOLE
	Amie Thuener O'Toole
	Vice President and Chief Accounting Officer

ALPHABET INC.
2021 STOCK PLAN
ALPHABET RESTRICTED STOCK UNIT AGREEMENT

This Alphabet Restricted Stock Unit Agreement (the "Agreement") is entered into as of [DATE] (the "Grant Date") by and between [NAME] (the "Participant") and Alphabet Inc., a Delaware corporation ("Alphabet", and together with its Subsidiaries, the "Company").

I. GRANT OF AWARD

Alphabet has granted the Participant an award of Alphabet restricted stock units (the "GSUs") pursuant to the Alphabet Inc. 2021 Stock Plan (the "Plan"). Each GSU represents the right to receive one share of Capital Stock, subject to the terms and conditions of the Plan and this Agreement, including any special terms and conditions for the jurisdiction in which the Participant resides contained in Exhibit A or any other appendix hereto (the "Appendix"). Certain details of the GSUs, specifically the number of GSUs and the vesting schedule of the GSUs (collectively, the "GSU Details") are accessible to the Participant through the Participant's brokerage account and the GSU Details are hereby incorporated into this Agreement by reference. Capitalized terms used but not otherwise defined in this Agreement shall have the meanings given to such terms in the Plan.

II. TERMS OF GSUs

1. Vesting of GSUs.

(a) In General. Except as otherwise provided in subsection (b) below, the GSUs will vest in accordance with the vesting schedule set forth in the GSU Details, subject to the Participant's continued employment with, or service to, the Company on each applicable vesting date. In the event the Participant ceases to be employed by, or ceases to provide services to, the Company for any reason except his or her death (as set forth in subsection (b) below), if applicable, all of the then outstanding and unvested GSUs will be forfeited effective as of the date that the Participant ceases to be employed by, or ceases to provide services to, the Company (the "Termination Date") and the Participant will have no further rights to such unvested GSUs. Unless and until the GSUs have vested, the Participant will have no right to the delivery of any shares of Capital Stock pursuant thereto and prior to the actual delivery of the shares of Capital Stock pursuant to the GSUs, the GSUs represent an unfunded, unsecured obligation of the Company, payable (if at all) only from the general assets of the Company.

(b) Death of Participant. In the event that the Participant ceases to be employed by, or ceases to provide services to, the Company as a result of the Participant's death, then (i) all of the then outstanding and unvested GSUs shall immediately vest as of the Termination Date, and (ii) any delivery of shares of Capital Stock to be made to the Participant under this Agreement will be made to the Participant's designated beneficiary, provided, that, such beneficiary has been designated prior to the Participant's death; in the absence of any such effective designation, the shares will be delivered to the administrator or executor of the Participant's estate. Any such administrator or executor must furnish Alphabet with (A) written notice of his or her status as transferee, (B) a copy of the will and/or such evidence as the Committee may deem necessary to establish the validity of the transfer, and (C) an agreement by the transferee to comply with all the terms and conditions of the GSUs that are or would be applicable to the Participant and to be bound by the acknowledgments made by the Participant hereunder. Delivery of the shares of Capital Stock pursuant to the GSUs will be made as soon as practicable following the Termination Date but in no event later than thirty (30) days following such date.

2. Settlement of GSUs. Settlement of vested GSUs shall occur as soon as practicable following the applicable vesting date, but in no event later than thirty (30) days following such vesting date. Alphabet will settle the vested GSUs by issuing (either in book-entry form or otherwise) to the Participant (or the Participant's beneficiary or estate, in the event of the Participant's death), one share of Capital Stock for each vested GSU, subject to satisfaction of all applicable Tax-Related Items, as described in Section 4 below.

3. Leave of Absence; Reduced Schedule. Vesting of the GSUs during (i) any leave of absence of the Participant and (ii) any period during which the Participant works a reduced schedule, shall be subject to the terms and conditions of the Leaves of Absence and Stock Vesting Policy, as in effect on the Grant Date.

4. Taxes.

(a) Liability for Tax-Related Items. The Participant acknowledges that the Participant is ultimately liable and responsible for any and all income taxes (including federal, state and local income taxes), social insurance, payroll taxes and other tax-related withholding (the "Tax-Related Items") arising in connection with the GSUs, regardless of any action the Company takes with respect to such Tax-Related Items. The Participant further acknowledges that the Company (i) does not make any representation or undertaking regarding the treatment of any Tax-Related Items in connection with any aspect of the GSUs, including the grant, vesting and settlement of the GSUs, or the subsequent sale of shares of Capital Stock acquired upon settlement of the GSUs and (ii) does not commit, and is under no obligation, to structure the terms of the GSUs or any aspect of the GSUs to reduce or eliminate the Participant's liability for Tax-Related Items or achieve any particular tax result.

(b) Payment of Withholding Taxes. Notwithstanding any contrary provision of this Agreement, no portion of the GSUs will be settled unless and until satisfactory arrangements (as determined by the Committee) have been made by the Participant with respect to the payment of any taxes which the Company determines must be withheld with respect to such portion of the GSUs; provided, that, if the Participant fails to make satisfactory arrangements with respect to such taxes within two and one half (2.5) months following the end of the calendar year in which the applicable vesting date occurs, then the applicable portion of the GSUs shall be forfeited.

(i) Unless the Participant is a director or executive officer (within the meaning of Section 16 of the Exchange Act and the regulations thereunder) of Alphabet (each, a "Section 16 Person") at the time that the GSUs, or a portion thereof, are settled, the Committee may use any method permitted by the Plan to satisfy the federal, state and local withholding tax requirements attributable to the GSUs, or portion thereof, being settled; and

(ii) If the Participant is a Section 16 Person at the time that the GSUs, or a portion thereof, are settled, then the Committee shall, pursuant to such procedures as it may specify from time to time, withhold a number of shares of Capital Stock otherwise issuable upon settlement of the GSUs, or portion thereof, having an aggregate Fair Market Value sufficient to satisfy the federal, state and local withholding tax requirements attributable to the GSUs, or such portion thereof, but not greater than the withholding obligations, as determined by the Committee in its discretion; provided, that, the Committee hereby reserves the discretion to amend this Agreement by notice to the Participant and without obtaining the Participant's consent, to allow the Committee to use any one or more methods permitted by the Plan to satisfy the federal, state and local withholding tax requirements attributable to the GSUs, or portion thereof, being settled.

5. Rights as Stockholder. Neither the Participant nor any person claiming under or through the Participant will have any of the rights or privileges of a stockholder of Alphabet in respect of any shares of Capital Stock deliverable pursuant to the GSUs unless and until such shares of Capital Stock have been issued on the records of Alphabet or its transfer agents or registrars. After such issuance, the Participant will have all the rights as a stockholder of Alphabet with respect to such shares of Capital Stock.

6. No Special Employment Rights; No Right to Future Awards. Nothing contained in this Agreement shall confer upon the Participant any right with respect to the continuation of his or her employment by, or service to, the Company or interfere in any way with the right of the Company at any time to terminate such employment or service or to increase or decrease the compensation of the Participant from the rate in existence at the Grant Date. The grant of the GSUs is at the sole discretion of Alphabet and does not create any contractual or other right to receive future awards of GSUs, or benefits in lieu of GSUs, even if GSUs have been awarded to the Participant repeatedly in the past.

7. GSUs Not Transferable. Except to the limited extent provided in Section 1(b) above, the GSUs and the rights and privileges conferred hereby may not be transferred, assigned, pledged or hypothecated in any way by the Participant (whether by operation of law or otherwise) and may not be subject to sale under execution, attachment or similar process. Any attempt by the Participant to transfer, assign, pledge, hypothecate or otherwise transfer the GSUs, or any right or privilege conferred hereby, and any attempted sale under any execution, attachment or similar process, shall be void and unenforceable against the Company.

8. Modification; Entire Agreement; Waiver. No modification of any provision of this Agreement which reduces the Participant's rights hereunder will be valid unless the same is agreed to in writing by the parties hereto. This Agreement, including the Appendix and the GSU Details, together with the Plan, represent the entire agreement between the parties with respect to the GSUs. The failure of Alphabet to enforce at any time any provision of this Agreement will in no way be construed to be a waiver of such provision or of any other provision hereof. Alphabet reserves the right, however, to the extent Alphabet deems necessary or advisable in its sole discretion, to unilaterally alter or modify the terms of the GSUs set forth in this Agreement in

order to ensure that the GSUs either qualify for exemption from, or comply with, the requirements of Section 409A of the Internal Revenue Code of 1986, as amended, and the regulations promulgated thereunder ("Section 409A"); provided, however that the Company makes no representations that the GSUs will be exempt from, or will comply with, the requirements of Section 409A.

9. Binding Agreement. Subject to the limitation on the transferability of the GSUs contained herein, this Agreement will be binding upon and inure to the benefit of the heirs, legatees, legal representatives, successors and assigns of the parties hereto.

10. Additional Conditions to Issuance of Shares of Capital Stock. Alphabet shall not be required to issue any shares of Capital Stock hereunder prior to fulfillment of all of the following conditions: (a) the completion of any registration or other qualification of such shares of Capital Stock under any federal or state law or under the rulings or regulations of the Securities and Exchange Commission or any other governmental regulatory body, or under any stock exchange on which the shares of Capital Stock are listed for trading, which the Committee shall, in its absolute discretion, deem necessary or advisable; (b) the obtaining of any approval or other clearance from any federal or state governmental agency, which the Committee shall, in its absolute discretion, determine to be necessary or advisable; and (c) the lapse of such reasonable period of time not to exceed thirty (30) days following the applicable vesting date of any portion of the GSUs as the Committee may establish from time to time for reasons of administrative convenience.

11. Plan Governs. This Agreement is subject in all respects to all terms and provisions of the Plan and the Plan document is hereby incorporated into this Agreement. In the event of a conflict between one or more provisions of this Agreement and one or more provisions of the Plan, the provisions of the Plan will control.

12. Policy Against Insider Trading. By accepting the GSUs, the Participant acknowledges that (a) a copy of Alphabet's Policy Against Insider Trading (the "Trading Policy") has been made available to the Participant, (b) the Participant has had an opportunity to review the Trading Policy and (c) the Participant is bound by all the terms and conditions of the Trading Policy.

13. Committee Authority. The Committee has full discretionary authority to administer the Plan, including discretionary authority to interpret and construe any and all provisions of the Plan and this Agreement and to adopt and amend from time to time such rules and regulations for the administration of the Plan as the Committee may deem necessary or appropriate. All actions taken and all interpretations and determinations made by the Committee will be final and binding upon the Participant, the Company and all other interested persons.

14. Captions. Captions provided herein are for convenience only and shall not affect the scope, meaning, intent or interpretation of the provisions of this Agreement.

15. Severability. In the event that any provision in this Agreement is held to be invalid or unenforceable for any reason, such provision will be severable from, and such invalidity or unenforceability will not be construed to have any effect on, the remaining provisions of this Agreement.

16. Governing Law. This Agreement shall be construed and administered in accordance with the laws of the State of New York without regard to its conflict of law principles.

17. Section 409A Compliance. It is intended that the Plan and the Agreement comply with, or be exempt from the requirements of Section 409A and any related guidance promulgated with respect to such Section by the U.S. Department of the Treasury or the Internal Revenue Service. Accordingly, to the maximum extent permitted, this Agreement shall be interpreted and administered to be in compliance therewith or exempt therefrom. Notwithstanding anything contained herein to the contrary, to the extent required in order to avoid accelerated taxation and/or tax penalties under Section 409A, the Participant shall not be considered to have terminated employment with, or service to, the Company for purposes of this Agreement until the Participant would be considered to have incurred a "separation from service" from the Company within the meaning of Section 409A. Each amount to be paid or benefit to be provided pursuant to this Agreement shall be construed as a separate identified payment for purposes of Section 409A.

18. ***Employee Data Privacy Consent.***

(a) ***The Company is located at 1600 Amphitheatre Parkway, Mountain View, CA 94043, U.S.A., and grants employees of the Company and its affiliates GSUs, at the Company's sole discretion. If the Participant would like to be eligible to participate in the Plan, the Participant should review and accept the following information about the Company's data processing practices.***

(b) ***Data Collection and Usage. The Company collects, processes and uses the Participant's personal data, including, name, home address and telephone number, date of birth, social insurance number or other identification number, salary, citizenship, job title, any shares of stock or directorships held in the Company, and details of all GSUs cancelled, vested, or outstanding in the Participant's favor, which the Company receives from the Participant or the Participant's employer. If the Company offers the Participant a grant of GSUs under the Plan, then the Company will collect the Participant's personal data for purposes of implementing, administering and managing the Plan. The Company's legal basis for the processing of the Participant's personal data would be his or her consent.***

(c) ***Stock Plan Administration Service Providers. The Company may transfer personal data to third parties which assist the Company with the implementation, administration and management of the Plan, including Charles Schwab & Co., Inc., Morgan Stanley Smith Barney, LLC, and/or such other third parties as may be selected by the Company. In the future, the Company may select a different service provider and share the Participant's data with another company that serves in a similar manner. The Company's***

service provider will open an account for the Participant to receive and trade shares of Capital Stock. The Participant will be asked to agree on separate terms and data processing practices with the service provider, which is a condition to the Participant's ability to participate in the Plan.

(d) ***International Data Transfers. The Company and its service providers are based in the United States. If the Participant is outside the United States, the Participant should note that his or her country may have enacted data privacy laws that are different from those of the United States. The Company's legal basis for the transfer of personal data is the Participant's consent.***

(e) ***Data Retention. The Company will use the Participant's personal data only as long as is necessary to implement, administer and manage the Participant's participation in the Plan or as required to comply with legal or regulatory obligations, including under applicable tax and securities laws. When the Company no longer needs the personal data, the Company will remove it from its systems. If the Company keeps data longer, it would be to satisfy legal, tax or regulatory obligations and the Company's legal basis would be relevant laws or regulations.***

(f) ***Voluntariness and Consequences of Consent Denial or Withdrawal. The Participant's participation in the Plan and grant of consent is purely voluntary. The Participant may deny or withdraw his or her consent at any time. If the Participant does not consent, or if the Participant withdraws his or her consent, the Participant may not be able to participate in the Plan. This would not affect the Participant's salary from or employment with the Participant's employer; the Participant would merely forfeit the opportunities associated with the Plan.***

(g) ***Data Subject Rights. The Participant may have a number of rights under data privacy laws in his or her country. Depending on where the Participant is based, the Participant's rights may include the right to (a) request access to or copies of personal data the Company processes, (b) rectification of incorrect data, (c) deletion of data, (d) restrictions on processing, (e) portability of data, (f) lodge complaints with competent authorities in the Participant's country, and/or (g) request a list with the names and addresses of any potential recipients of personal data. To receive clarification regarding the Participant's rights or to exercise your rights, please contact gem-help@google.com.***

(h) ***Additional Consents. Upon request of the Company or the Participant's employer, the Participant agrees to provide a separate executed data privacy consent form (or any other agreements or consents that may be required by the Company and/or the Participant's employer) that the Company and/or the Participant's employer may deem necessary to obtain from the Participant for the purpose of administering the Participant's participation in the Plan in compliance with the data privacy laws in the Participant's country, either now or in the future. The Participant understands and agrees that the Participant may not be able to participate in the Plan if he or she fails to provide any such consent or agreement requested by the Company and/or the Participant's employer.***

19. Appendix. Notwithstanding any provisions in this Agreement, if the Participant resides outside of the United States, certain additional general terms and conditions as set forth in the Appendix will apply to the Participant. In addition, the GSUs shall be subject to any special terms and conditions set forth in the Appendix for the jurisdiction in which the Participant resides. If the Participant relocates from the United States to a country outside the United States or relocates between the jurisdictions specified in the Appendix, the additional general and special terms and conditions, as applicable, will apply to the Participant, to the extent that Alphabet determines that the application of such terms and conditions is necessary or advisable in order to comply with local law or facilitate the administration of the Plan. The Appendix constitutes part of this Agreement.

20. Acceptance. The Participant must accept the GSUs and agree to the terms and conditions of the GSUs as set forth in the Plan and this Agreement (including the GSU Details and the Appendix), by electronically accepting this Agreement immediately following the Grant Date.

ALPHABET INC.

2021 STOCK PLAN

ALPHABET PERFORMANCE STOCK UNIT AGREEMENT

This Alphabet Performance Stock Unit Agreement (this “Agreement”) is entered into as of [•] (the “Grant Date”) by and between [PARTICIPANT NAME] (the “Participant”) and Alphabet Inc., a Delaware corporation (“Alphabet, and together with its Subsidiaries, the “Company”).

I. GRANTS

Pursuant to the Alphabet Inc. 2021 Stock Plan (the “Plan”), Alphabet hereby awards grants of performance stock units (“PSUs,” and each grant of PSUs, a “Grant”) with Target Awards and Performance Periods as set forth in the table below.

Target Award	Performance Period
________ PSUs	January 1, 2021 – December 31, 2023

Each PSU represents the right to receive one share of Capital Stock, subject to the terms and conditions of the Plan and this Agreement. The number of PSUs earned under each Grant may be equal to, greater than or less than its Target Award (including zero). Capitalized terms used but not otherwise defined in this Agreement shall have the meanings given to such terms in the Plan.

II. TERMS OF PSUs

1. Vesting of PSUs.

(a) In General. Except as otherwise provided in subsections (b) and (c) below, the number of PSUs (if any) earned by the Participant under each Grant based on Alphabet’s performance against the Performance Goals (as defined in Exhibit A) during the applicable Performance Period as determined by the Committee in accordance with Exhibit A (each, a “Final Award”) will vest on the Determination Date (as defined in Exhibit A) for such Grant, subject to the Participant’s continued employment with, or service to, the Company through such date, and be settled in accordance with Section II.2 below, and any unvested PSUs will be forfeited as of the Determination Date and the Participant will have no further rights to such unvested PSUs. In the event the Participant ceases to be employed by, or ceases to provide services to, the Company prior to the Determination Date for a Grant for any reason other than (i) death (as set forth in subsection (b) below) or (ii) termination by the Company without Cause (as set forth in subsection (c) below), all of the then outstanding and unvested PSUs granted under this Agreement will be forfeited effective as of the date that the Participant ceases to be employed by, or ceases to provide services to, the Company (the “Termination Date”) and the Participant will have no further rights to such unvested PSUs. Prior to any actual delivery of shares of Capital Stock pursuant to the PSUs, the PSUs represent an unfunded, unsecured obligation of the Company, payable (if at all) only from the general assets of the Company.

(b) Death of the Participant. In the event that the Participant ceases to be employed by, or ceases to provide services to, the Company as a result of the Participant's death (i)(x) prior to the start of the Performance Period of a Grant or during the Performance Period of a Grant, then the Target Award in respect of such Grant shall immediately vest as of the Termination Date or (y) following the end of the Performance Period of a Grant but prior to its Determination Date, then the Final Award (as determined by the Committee in accordance with Exhibit A) in respect of such Grant shall immediately vest as of such Determination Date and (ii) any delivery of shares of Capital Stock to be made to the Participant under this Agreement will be made, subject to satisfaction of all applicable Tax-Related Items, as described in Section II.4 below, to the Participant's designated beneficiary; provided, that, such beneficiary has been designated prior to the Participant's death; in the absence of any such effective designation, the shares will be delivered to the administrator or executor of the Participant's estate. Any such administrator or executor must furnish Alphabet with (A) written notice of his or her status as transferee, (B) a copy of the will and/or such evidence as the Committee may deem necessary to establish the validity of the transfer, and (C) an agreement by the transferee to comply with all the terms and conditions of PSUs that are or would be applicable to the Participant and to be bound by the acknowledgments made by the Participant hereunder. Delivery of the shares of Capital Stock in respect of PSUs vesting pursuant to this Section II.1(b) will be made as soon as practicable following the Termination Date or the Determination Date, as applicable, but in no event later than forty five (45) days following such date and the Company shall have no further obligations under this Agreement.

(c) Termination of the Participant without Cause. In the event that the Participant ceases to be employed by, or ceases to provide services to, the Company as a result of the Company's termination of the Participant's employment or services without Cause prior to the Determination Date for a Grant, then the number of PSUs (if any) calculated by multiplying the Final Award (as determined by the Committee in accordance with Exhibit A) in respect of such Grant by a fraction, the numerator of which is the number of calendar days during the Performance Period during which the Participant was employed by, or providing services to, the Company and the denominator of which is the aggregate number of calendar days in the Performance Period, will vest and be settled in accordance with Section II.2 below and any unvested PSUs will be forfeited as of the Determination Date and the Participant will have no further rights to such unvested PSUs; provided, that if the Termination Date occurs prior to the start of the Performance Period of a Grant, all PSUs under the Grant will be immediately forfeited as of the Termination Date and the Participant will have no further rights to such PSUs.

For purposes of this Agreement, "Cause" means any of the following: (i) a willful failure by Participant, in the good faith judgment of the Board, to substantially perform the duties associated and consistent with the scope of the Participant's position; (ii) the Participant's refusal to implement or follow a lawful directive from the Board or CEO; (iii) the Participant's breach of fiduciary duty to the Company; (iv) the Participant's material breach of any written agreement between the Participant and the Company, including, without limitation, any applicable At-Will Employment, Confidential Information and Invention Assignment Agreement; (v) the Participant's intentional engagement in conduct that is materially injurious to the Company (economically or reputationally), including but not limited to, misappropriation of trade secrets or any other tangible or intangible property of the Company, fraud or embezzlement, but excluding any conduct by Participant that is consistent with or pursuant to a lawful directive of the Board or CEO; (vi) the Participant's material violation of a material provision of the Code of Conduct or any policy of Alphabet, Google LLC or any other affiliate of Alphabet that is applicable to the Participant (e.g., policy against sexual harassment, Alphabet's Policy Against Insider Trading (the "Trading Policy"), etc.); (vii) the Participant's material violation of any federal or state law or regulation applicable to the business of the Company; (viii) the Participant's violation of any securities laws, rules or regulations, or the rules and regulations of any securities exchange or association of which the Company is a member, failure to cooperate with the Company in any investigation or formal proceeding or being found liable in a Securities and Exchange Commission enforcement action or otherwise being disqualified from serving in the Participant's position; (ix) the Participant's engaging in gross misconduct; (x) a substantiated finding by the Company (or its delegate) of sexual harassment, sexual misconduct or retaliation; (xi) the Participant being under investigation for sexual harassment, sexual misconduct or retaliation; or (xii) the Participant's commission of a felony under the laws of the United States or any state thereof or any comparably-classified crime under the laws of a non-US jurisdiction or other serious crime involving moral turpitude. Notwithstanding the foregoing, termination of the Participant's employment or service under (i), (ii), (iii), (iv) or (vi) (only) above will not be for "Cause" unless the Company determines in its sole discretion that the conduct alleged to constitute "Cause" is susceptible of cure or remedy; and, if so, the Participant: (a) is provided with written notice setting forth with specificity the conduct alleged to constitute "Cause," (b) is provided not less than 30 days following such notice (the "Cure Period") to cure or remedy such conduct prior to the effective date of the Participant's termination of employment or services, during which period the Participant shall be provided the opportunity at the Participant's election to address the Board with respect to such conduct (with the assistance of legal counsel, if requested) and (c) fails to cure or remedy such conduct during the Cure Period.

2. Settlement of PSUs. Settlement of vested PSUs in respect of a Grant shall occur as soon as practicable following the applicable Determination Date, but in no event later than forty five (45) days following such Determination Date, and the Company shall have no further obligations under such Grant. Alphabet will settle vested PSUs by issuing (either in book-entry form or otherwise) to the Participant (or the Participant's beneficiary or estate, in the event of the Participant's death), one share of Capital Stock for each vested PSU, subject to satisfaction of all applicable Tax-Related Items, as described in Section II.4 below.

3. Adjustment Upon Certain Changes. In the event of any transaction or other event described in Section 9 of the Plan, each Grant shall be treated the same way as all other restricted stock units issued under the Plan held by the executive officers of Alphabet in office at the time of such event; provided, that in addition to any actions taken by the Committee in respect of such awards pursuant to Sections 9(c) and (d) of the Plan, to the extent determined by the Committee to be necessary and appropriate in its sole discretion, the number of PSUs subject to each Grant will be fixed at its Target Award.

4. Taxes.

(a) Liability for Tax-Related Items. The Participant acknowledges that the Participant is ultimately liable and responsible for any and all income taxes (including federal, state and local income taxes), payroll taxes and other tax-related withholding (the "**Tax-Related Items**") arising in connection with PSUs, regardless of any action the Company takes with respect to such Tax-Related Items. The Participant further acknowledges that the Company (i) does not make any representation or undertaking regarding the treatment of any Tax-Related Items in connection with any aspect of PSUs, including the grant, vesting and settlement of PSUs under any Grant, or the subsequent sale of shares of Capital Stock acquired upon settlement of any PSUs and (ii) does not commit, and is under no obligation, to structure the terms of PSUs or any aspect of PSUs under any Grant to reduce or eliminate the Participant's liability for Tax-Related Items or achieve any particular tax result.

(b) Payment of Withholding Taxes. Alphabet shall, pursuant to such procedures as the Committee may specify from time to time, withhold a number of shares of Capital Stock otherwise issuable upon settlement of any vested PSUs having an aggregate Fair Market Value sufficient to satisfy the federal, state and local withholding tax requirements attributable to vested PSUs but not greater than the withholding obligations, as determined by the Committee in its discretion; provided, that, the Committee hereby reserves the discretion to amend this Agreement by notice to the Participant and without obtaining the Participant's consent, to allow the Committee to use any one or more methods permitted by the Plan to satisfy the federal, state and local withholding tax requirements attributable to the PSUs being settled.

5. Rights as Stockholder. Neither the Participant nor any person claiming under or through the Participant will have any of the rights or privileges of a stockholder of Alphabet in respect of any shares of Capital Stock deliverable pursuant to PSUs unless and until such shares of Capital Stock have been issued on the records of Alphabet or its transfer agents or registrars. After such issuance, the Participant will have all the rights as a stockholder of Alphabet with respect to such shares of Capital Stock.

Notwithstanding the foregoing, in the event that any dividend or other distribution is declared and paid on shares of Capital Stock after the Grant Date, but prior to the complete settlement, cancellation or forfeiture of any PSUs under a Grant, the Participant shall be entitled to receive, upon settlement of any Grant, an amount equal to the dividends or other distributions that would have been paid or issued on the number of shares of Capital Stock actually vested and issuable to Participant pursuant to such Grant had they been outstanding during such period, as calculated by the Committee in its discretion. Such dividend equivalent amount will be settled with the Participant, upon settlement of the Award, in the same form, and in the same amount, as the actual dividend or distribution was paid to the holders of the Capital Stock.

6. No Special Employment Rights; No Right to Future Awards. Nothing contained in this Agreement shall confer upon the Participant any right with respect to the continuation of the Participant's employment by, or service to, the Company or interfere in any way with the right of the Company at any time to terminate such employment or service or to increase or decrease the compensation of the Participant from the rate in existence at the Grant Date. The award of the Grants is at the sole discretion of Alphabet and does not create any contractual or

other right to receive future grants of PSUs, or benefits in lieu of PSUs, even if PSUs have been awarded to the Participant repeatedly in the past.

7. PSUs Not Transferable. Except to the limited extent provided in Section II.1(b) above, PSUs and the rights and privileges conferred under the Grants awarded hereby may not be transferred, assigned, pledged or hypothecated in any way by the Participant (whether by operation of law or otherwise) and may not be subject to sale under execution, attachment or similar process. Any attempt by the Participant to transfer, assign, pledge, hypothecate or otherwise transfer PSUs, or any right or privilege conferred under the Grants awarded hereby, and any attempted sale under any execution, attachment or similar process, shall be void and unenforceable against the Company.

Notwithstanding the immediately preceding paragraph, and subject to the terms and conditions of this paragraph, the Participant may, with the Company's express written consent, transfer all or a portion of any unvested Grants (but only a whole number of PSUs subject to any Grant) into one or more trusts for the purposes of estate planning (the "**Trust**"). Any Trust must: (a) be subject to any and all terms and conditions of the Plan and this Agreement, including, but not limited to, Section II.1 of this Agreement; (b) be described in General Instruction A.1(a)(5) of Form S-8; (c) not provide Participant with any consideration in connection with a transfer permitted under this paragraph; and (d) if requested by the Company, comply with the Trading Policy (as it may be amended from time to time). The Participant acknowledges and agrees that the Company has not made, and does not make in connection with the Grants made under this Agreement, any representations under any applicable law, including, but not limited to, federal or state tax, securities, property, probate or other estate laws, and that the Participant is solely responsible for compliance with all such applicable laws, with respect to any Grants or PSUs transferred into a Trust as permitted under this paragraph.

8. Modification; Entire Agreement; Waiver. No modification of any provision of this Agreement which reduces the Participant's rights hereunder will be valid unless the same is agreed to in writing by the parties hereto. This Agreement, including Exhibit A, together with the Plan, represent the entire agreement between the parties with respect to the PSUs awarded by the Grants hereunder. The failure of Alphabet to enforce at any time any provision of this Agreement will in no way be construed to be a waiver of such provision or of any other provision hereof. Alphabet reserves the right, however, to the extent Alphabet deems necessary or advisable in its sole discretion, to unilaterally alter or modify the terms of the Grants awarded under this Agreement in order to ensure that PSUs either qualify for exemption from, or comply with, the requirements of Section 409A of the Internal Revenue Code of 1986, as amended, and the regulations promulgated thereunder ("**Section 409A**"); provided, however that the Company makes no representations that PSUs will be exempt from, or will comply with, the requirements of Section 409A.

9. Binding Agreement. Subject to the limitation on the transferability of PSUs contained herein, this Agreement will be binding upon and inure to the benefit of the heirs, legatees, legal representatives, successors and assigns of the parties hereto.

10. Additional Conditions to Issuance of Shares of Capital Stock. Alphabet shall not be required to issue any shares of Capital Stock hereunder prior to fulfillment of all of the following conditions: (a) the completion of any registration or other qualification of such shares of Capital Stock under any federal or state law or under the rulings or regulations of the Securities and Exchange Commission or any other governmental regulatory body, or under any stock exchange on which the shares of Capital Stock are listed for trading, which the Committee shall, in its absolute discretion, deem necessary or advisable; (b) the obtaining of any approval or other clearance from any federal or state governmental agency, which the Committee shall, in its absolute discretion, determine to be necessary or advisable; and (c) the lapse of such reasonable period of time not to exceed forty-five (45) days following a Determination Date as the Committee may establish from time to time for reasons of administrative convenience.

11. Plan Governs. This Agreement is subject in all respects to all terms and provisions of the Plan and the Plan document is hereby incorporated into this Agreement. In the event of a conflict between one or more provisions of this Agreement and one or more provisions of the Plan, the provisions of the Plan will control.

12. Policy Against Insider Trading; Recoupment.

(a) By accepting the Grants, the Participant acknowledges that (i) a copy of the Trading Policy has been made available to the Participant, (ii) the Participant has had an opportunity to review the Trading Policy and (iii) the Participant is bound by all the terms and conditions of the Trading Policy.

(b) By accepting the Grants, the Participant agrees that (i) incentive-based compensation paid to the Participant pursuant to this Agreement may be subject to recoupment or clawback to the extent permitted or required by applicable law (A) in the event of a restatement of financial statements due to material noncompliance with any financial reporting requirement as a result of misconduct by any person or (B) as may be required by any applicable listing standards of a national securities exchange adopted in accordance with Section 954 of the Dodd-Frank Wall Street Reform and Consumer Protection Act and any implementing rules and regulations of the U.S. Securities and Exchange Commission adopted thereunder, and (ii) by accepting the Grants pursuant to the Plan and this Agreement, Participant authorizes such clawback and agrees to comply with any Company request or demand for such recoupment.

13. Committee Authority. The Committee has full discretionary authority to administer the Plan, including discretionary authority to interpret and construe any and all provisions of the Plan and this Agreement and to adopt and amend from time to time such rules and regulations for the administration of the Plan as the Committee may deem necessary or appropriate. All actions taken and all interpretations and determinations made by the Committee will be final and binding upon the Participant, the Company and all other interested persons.

14. Captions. Captions provided herein are for convenience only and shall not affect the scope, meaning, intent or interpretation of the provisions of this Agreement.

15. Severability. In the event that any provision in this Agreement is held to be invalid or unenforceable for any reason, such provision will be severable from, and such invalidity or unenforceability will not be construed to have any effect on, the remaining provisions of this Agreement.

16. Governing Law. This Agreement shall be construed and administered in accordance with the laws of the State of California without regard to its conflict of law principles.

17. Section 409A Compliance. It is intended that the Plan and the Agreement comply with, or be exempt from, the requirements of Section 409A and any related guidance promulgated with respect to such Section by the U.S. Department of the Treasury or the Internal Revenue Service. Accordingly, to the maximum extent permitted, this Agreement shall be interpreted and administered to be in compliance therewith or exempt therefrom. Notwithstanding anything contained herein to the contrary, to the extent required in order to avoid accelerated taxation and/or tax penalties under Section 409A, the Participant shall not be considered to have terminated employment with, or service to, the Company for purposes of this Agreement until the Participant would be considered to have incurred a "separation from service" from the Company within the meaning of Section 409A. Each amount to be paid or benefit to be provided pursuant to this Agreement shall be construed as a separate identified payment for purposes of Section 409A.

18. Employee Data Privacy.

(a) The Participant hereby explicitly and unambiguously consents to the collection, use and transfer, in electronic or other form, of the Participant's personal data as described in this Agreement by and among, as applicable, the Company and its Subsidiaries and affiliates for the exclusive purpose of implementing, administering and managing the Participant's participation in the Plan.

(b) The Participant understands that the Company may hold certain personal information about him, including, but not limited to, the Participant's name, home address and telephone number, date of birth, social insurance number or other identification number, salary, nationality, job title, any shares of Capital Stock or directorships held in the Company, details of all entitlement to shares of Capital Stock awarded, canceled, exercised, vested, unvested or outstanding in Participant's favor, for the purpose of implementing, administering and managing the Plan ("**Data**").

(c) The Participant understands that Data will be transferred to Charles Schwab & Co., Inc., Morgan Stanley Smith Barney LLC, and/or such other third parties as may be selected by the Company in the future to assist the Company with the implementation, administration and management of the Plan, that these recipients may be located in the Participant's country or elsewhere, and that the recipient's country may have different data privacy laws and protections than the Participant's country. The Participant understands that he or she may request a list with the names and addresses of any potential recipients of the Data by contacting the Participant's local human resources representative.

(d) The Participant authorizes the Company, Charles Schwab & Co., Inc., Morgan Stanley Smith Barney LLC, and any other possible recipients which may assist the Company (presently or in the future) with implementing, administering and managing the Plan to receive, possess, use, retain and transfer the Data, in electronic or other form, for the sole purpose of implementing, administering and managing the Participant's participation in the Plan, including any requisite transfer of such Data as may be required to a broker or other third party with whom the Participant may elect to deposit any shares of Capital Stock acquired upon settlement of the PSUs. The Participant understands that Data will be held only as long as is necessary to implement, administer and manage the Participant's participation in the Plan. The Participant understands that the Participant may, at any time, view Data, request additional information about the storage and processing of Data, require any necessary amendments to Data or refuse or withdraw the consents herein, in any case without cost, by contacting in writing the Participant's local human resources representative. The Participant understands, however, that refusing or withdrawing consent may affect the Participant's ability to participate in the Plan. For more information on the consequences of the refusal to consent or withdrawal of consent, the Participant understands that he or she may contact the Participant's local human resources representative.

19. Acceptance. The Participant must accept the Grants and agree to the terms and conditions of the Grants as set forth in the Plan and this Agreement (including Exhibit A), by electronically accepting this Agreement immediately following the Grant Date.

EXHIBIT A

A. Performance Goals. The number of PSUs that may be earned under each Grant will be determined based on Alphabet's achievement of Threshold, Target or Maximum levels ("**Performance Goals**") of cumulative total shareholder return ("**TSR**") vs. the respective TSRs of the constituent companies in the S&P 100 Index (the "**S&P 100 Index Companies**") (the "**TSR Performance**") over the Performance Period in respect of such Grant. The terms "Threshold," "Target" and "Maximum," when used in this Exhibit A to describe Alphabet's TSR Performance, are defined below:

Performance Goals	Alphabet's Percentile Rank Relative to Peer Companies	Percentage of Target Award Earned (straight-line interpolation between Threshold and Target; and Target and Maximum)
Minimum	Below 25th percentile	0%
Threshold	At 25th percentile	50%
Target	At 50th percentile	100%
Maximum	At or above 75th percentile	200%

TSR Performance for Alphabet and for the S&P 100 Index Companies (each, a "**Peer Company**") shall be calculated as follows:

$$\frac{\text{(Ending Average Share Price – Starting Average Share Price) + Dividends Reinvested}}{\text{Starting Average Share Price}}$$

Where:

Starting Average Share Price for both Alphabet and the Peer Companies is equal to the average closing price for each trading day in the 90 calendar day period ending on the calendar day immediately preceding the first day of the Performance Period (inclusive of such calendar day).

Ending Average Share Price for both Alphabet and the Peer Companies is equal to the average closing price for each trading day in the 90 calendar day period ending on the last calendar day of the Performance Period (inclusive of such last calendar day).

The Peer Companies are those companies (other than Alphabet) comprising the S&P 100 Index on the Grant Date adjusted as follows in the event of certain corporate events in connection with the Peer Companies:

Merger with Company in Peer Group	In the event of a merger, acquisition or business combination transaction of a Peer Company with or by another Peer Company, the surviving entity shall remain a Peer Company
Merger with Company not in Peer Group where Peer Company survives	In the event of a merger of a Peer Company with an entity that is not a Peer Company, or the acquisition or business combination transaction of a Peer Company by an entity that is not a Peer Company, in each case where the Peer Company is the surviving entity and remains publicly traded, the surviving entity shall remain a Peer Company
Merger with Company not in Peer Group where Peer Company is not the survivor/Peer Company taken private	In the event of a merger or acquisition or business combination transaction of a Peer Company by or with an entity that is not a Peer Company or a "going private" transaction involving a Peer Company where the Peer Company is not the surviving entity or is otherwise no longer publicly traded, the company shall no longer be a Peer Company
Bankruptcy, Liquidation or Delisting	In the event of a bankruptcy, liquidation or delisting of a Peer Company at any time during the Performance Period, such company shall remain a Peer Company and be assigned a TSR of -100%. Delisting shall mean that a company ceases to be publicly traded on a national securities exchange as a result of any involuntary failure to meet the listing requirements of such national securities exchange, but shall not include delisting as a result of any voluntary going private or similar transaction.
Spin-off Transaction	In the event of a stock distribution from a Peer Company consisting of the shares of a new publicly-traded company (a "spin-off"), the Peer Company shall remain a Peer Company and the stock distribution shall be treated as a dividend from the Peer Company based on the fair market value of the distribution on the date of such distribution; the performance of the shares of the spun-off company shall not thereafter be tracked for purposes of calculating TSR

Dividends Reinvested for both Alphabet and the Peer Companies shall mean dividends paid with respect to an ex-dividend date that occurs beginning from the date when the Starting Average Share Price is measured through the end of the Performance Period (whether or not the dividend payment date occurs during this period), which shall be deemed to have been reinvested in the underlying common shares.

For TSR Performance, should Alphabet fail to achieve at least Threshold, zero percent (0%) of the Target Award shall be earned. Should Alphabet achieve (a) Threshold, fifty percent (50%) of the Target Award shall be earned, (b) Target, one hundred percent (100%) of the Target Award shall be earned, or (c) Maximum (or greater), two hundred percent (200%) of the Target Award shall be earned. Should Alphabet achieve a TSR Performance level that falls between Threshold and Target or between Target and Maximum, the percentage of the Target Award that shall be earned will be based upon straight-line interpolation between such Performance Goals, rounded up to the nearest whole share of Capital Stock.

B. Determination and Approval of Final Award. Within forty five (45) days following the last day of the Performance Period, the Committee shall determine achievement in respect of the Performance Goals (the date of such determination, the "**Determination Date**") and shall calculate and approve the Final Award in respect of such Grant. Any PSUs that are determined not to be earned by the Committee under such Grant will be forfeited as of the Determination Date and the Participant will have no further rights to such PSUs.

The Committee, in its sole discretion, shall make all determinations regarding the Performance Goals, including, but not limited to, the extent of achievement, and any adjustments to the calculation of TSR of Alphabet or the Peer Companies, as necessary or appropriate. Determinations made by the Committee will be final and binding on all parties and will be given the maximum discretion permitted by law.

CERTIFICATION OF CHIEF EXECUTIVE OFFICER
PURSUANT TO
EXCHANGE ACT RULES 13a-14(a) AND 15d-14(a),
AS ADOPTED PURSUANT TO
SECTION 302 OF THE SARBANES-OXLEY ACT OF 2002

I, Sundar Pichai, certify that:

1. I have reviewed this Quarterly Report on Form 10-Q of Alphabet Inc.;
2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;
3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;
4. The registrant’s other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:
   (a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;
   (b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;
   (c) Evaluated the effectiveness of the registrant’s disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and
   (d) Disclosed in this report any change in the registrant’s internal control over financial reporting that occurred during the registrant’s most recent fiscal quarter (the registrant’s fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant’s internal control over financial reporting; and
5. The registrant’s other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant’s auditors and the audit committee of the registrant’s board of directors (or persons performing the equivalent functions):
   (a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant’s ability to record, process, summarize and report financial information; and
   (b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant’s internal control over financial reporting.

Date: July 27, 2021

/S/ SUNDAR PICHAI

Sundar Pichai
Chief Executive Officer
(Principal Executive Officer)

**CERTIFICATION OF CHIEF FINANCIAL OFFICER
PURSUANT TO
EXCHANGE ACT RULES 13a-14(a) AND 15d-14(a),
AS ADOPTED PURSUANT TO
SECTION 302 OF THE SARBANES-OXLEY ACT OF 2002**

I, Ruth Porat, certify that:

1. I have reviewed this Quarterly Report on Form 10-Q of Alphabet Inc.;
2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;
3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;
4. The registrant's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:
   (a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;
   (b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;
   (c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and
   (d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and
5. The registrant's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):
   (a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and
   (b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: July 27, 2021

/S/ RUTH PORAT

Ruth Porat

Senior Vice President and
Chief Financial Officer
(Principal Financial Officer)

Exhibit 32.01

CERTIFICATIONS OF CHIEF EXECUTIVE OFFICER AND CHIEF FINANCIAL OFFICER PURSUANT TO 18 U.S.C. SECTION 1350, AS ADOPTED PURSUANT TO SECTION 906 OF THE SARBANES-OXLEY ACT OF 2002

I, Sundar Pichai, certify pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, that the Quarterly Report on Form 10-Q of Alphabet Inc. for the quarterly period ended June 30, 2021, fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934 and that information contained in such Quarterly Report on Form 10-Q fairly presents, in all material respects, the financial condition and results of operations of Alphabet Inc.

Date: July 27, 2021

By:	/S/ SUNDAR PICHAI
Name:	Sundar Pichai
Title:	Chief Executive Officer (Principal Executive Officer)

I, Ruth Porat, certify pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, that the Quarterly Report on Form 10-Q of Alphabet Inc. for the quarterly period ended June 30, 2021, fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934 and that information contained in such Quarterly Report on Form 10-Q fairly presents, in all material respects, the financial condition and results of operations of Alphabet Inc.

Date: July 27, 2021

By:	/S/ RUTH PORAT
Name:	Ruth Porat
Title:	Senior Vice President and Chief Financial Officer (Principal Financial Officer)

The foregoing certifications are not deemed filed with the Securities and Exchange Commission for purposes of Section 18 of the Securities Exchange Act of 1934, as amended (Exchange Act), and are not to be incorporated by reference into any filing of Alphabet Inc. under the Securities Act of 1933, as amended, or the Exchange Act, whether made before or after the date hereof, regardless of any general incorporation language in such filing.