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 September 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 October 19, 2021, there were 300,809,676 shares of Alphabet’s Class A common stock outstanding, 45,216,540 shares of Alphabet's Class B common stock outstanding, and 317,737,778 shares of Alphabet's Class C capital stock outstanding.

Alphabet Inc.
Form 10-Q
For the Quarterly Period Ended September 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 September 30, 2021 (unaudited)
Assets		
Current assets:		
Cash and cash equivalents	$ 26,465	$ 23,719
Marketable securities	110,229	118,284
Total cash, cash equivalents, and marketable securities	136,694	142,003
Accounts receivable, net	30,930	34,047
Income taxes receivable, net	454	753
Inventory	728	1,278
Other current assets	5,490	6,029
Total current assets	174,296	184,110
Non-marketable investments	20,703	26,101
Deferred income taxes	1,084	1,195
Property and equipment, net	84,749	94,631
Operating lease assets	12,211	12,918
Intangible assets, net	1,445	1,549
Goodwill	21,175	22,623
Other non-current assets	3,953	4,276
Total assets	$ 319,616	$ 347,403
Liabilities and Stockholders' Equity		
Current liabilities:		
Accounts payable	$ 5,589	$ 4,616
Accrued compensation and benefits	11,086	12,170
Accrued expenses and other current liabilities	28,631	30,113
Accrued revenue share	7,500	7,745
Deferred revenue	2,543	2,968
Income taxes payable, net	1,485	4,170
Total current liabilities	56,834	61,782
Long-term debt	13,932	14,288
Deferred revenue, non-current	481	510
Income taxes payable, non-current	8,849	8,984
Deferred income taxes	3,561	3,551
Operating lease liabilities	11,146	11,471
Other long-term liabilities	2,269	2,250
Total liabilities	97,072	102,836
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 664,682 (Class A 300,801, Class B 45,261, Class C 318,620) shares issued and outstanding	58,510	61,193
Accumulated other comprehensive income (loss)	633	(408)
Retained earnings	163,401	183,782
Total stockholders' equity	222,544	244,567
Total liabilities and stockholders' equity	$ 319,616	$ 347,403

See accompanying notes.

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

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2020	2021	2020	2021
Revenues	$ 46,173	$ 65,118	$ 125,629	$ 182,312
Costs and expenses:				
Cost of revenues	21,117	27,621	58,652	77,951
Research and development	6,856	7,694	20,551	22,854
Sales and marketing	4,231	5,516	12,632	15,308
General and administrative	2,756	3,256	8,221	9,370
Total costs and expenses	34,960	44,087	100,056	125,483
Income from operations	11,213	21,031	25,573	56,829
Other income (expense), net	2,146	2,033	3,820	9,503
Income before income taxes	13,359	23,064	29,393	66,332
Provision for income taxes	2,112	4,128	4,351	10,941
Net income	$ 11,247	$ 18,936	$ 25,042	$ 55,391
Basic net income per share of Class A and B common stock and Class C capital stock	$ 16.55	$ 28.44	$ 36.69	$ 82.76
Diluted net income per share of Class A and B common stock and Class C capital stock	$ 16.40	$ 27.99	$ 36.38	$ 81.53

See accompanying notes.

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

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2020	2021	2020	2021
Net income	$ 11,247	$ 18,936	$ 25,042	$ 55,391
Other comprehensive income (loss):				
Change in foreign currency translation adjustment	459	(614)	193	(671)
Available-for-sale investments:				
Change in net unrealized gains (losses)	(19)	(159)	1,346	(699)
Less: reclassification adjustment for net (gains) losses included in net income	(73)	(57)	(391)	(121)
Net change, net of income tax benefit (expense) of $27, $63, $(274) and $235	(92)	(216)	955	(820)
Cash flow hedges:				
Change in net unrealized gains (losses)	(48)	292	244	429
Less: reclassification adjustment for net (gains) losses included in net income	23	(60)	(114)	21
Net change, net of income tax benefit (expense) of $8, $(54), $(38) and $(89)	(25)	232	130	450
Other comprehensive income (loss)	342	(598)	1,278	(1,041)
Comprehensive income	$ 11,589	$ 18,338	$ 26,320	$ 54,350

See accompanying notes.

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

	Three Months Ended September 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 June 30, 2020	681,215	$ 55,937	$ (296)	$ 151,681	$ 207,322
Common and capital stock issued	1,669	15	0	0	15
Stock-based compensation expense	0	3,230	0	0	3,230
Tax withholding related to vesting of restricted stock units and other	0	(1,339)	0	0	(1,339)
Repurchases of capital stock	(5,160)	(536)	0	(7,361)	(7,897)
Sale of interest in consolidated entities	0	0	0	0	0
Net income	0	0	0	11,247	11,247
Other comprehensive income (loss)	0	0	342	0	342
Balance as of September 30, 2020	677,724	$ 57,307	$ 46	$ 155,567	$ 212,920

	Nine Months Ended September 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	6,185	158	0	0	158
Stock-based compensation expense	0	9,865	0	0	9,865
Tax withholding related to vesting of restricted stock units and other	0	(4,076)	0	0	(4,076)
Repurchases of capital stock	(16,796)	(1,648)	0	(21,597)	(23,245)
Sale of interest in consolidated entities	0	2,456	0	0	2,456
Net income	0	0	0	25,042	25,042
Other comprehensive income (loss)	0	0	1,278	0	1,278
Balance as of September 30, 2020	677,724	$ 57,307	$ 46	$ 155,567	$ 212,920

	Three Months Ended September 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 June 30, 2021	667,637	$ 60,436	$ 190	$ 176,939	$ 237,565
Common and capital stock issued	1,626	1	0	0	1
Stock-based compensation expense	0	3,914	0	0	3,914
Tax withholding related to vesting of restricted stock units and other	0	(2,641)	0	0	(2,641)
Repurchases of common and capital stock	(4,581)	(517)	0	(12,093)	(12,610)
Sale of interest in consolidated entities	0	0	0	0	0
Net income	0	0	0	18,936	18,936
Other comprehensive income (loss)	0	0	(598)	0	(598)
Balance as of September 30, 2021	664,682	$ 61,193	$ (408)	$ 183,782	$ 244,567

	Nine Months Ended September 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	5,114	8	0	0	8
Stock-based compensation expense	0	11,546	0	0	11,546
Tax withholding related to vesting of restricted stock units and other	0	(7,390)	0	0	(7,390)
Repurchases of common and capital stock	(15,654)	(1,791)	0	(35,010)	(36,801)
Sale of interest in consolidated entities	0	310	0	0	310
Net income	0	0	0	55,391	55,391
Other comprehensive income (loss)	0	0	(1,041)	0	(1,041)
Balance as of September 30, 2021	664,682	$ 61,193	$ (408)	$ 183,782	$ 244,567

See accompanying notes.

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

	Nine Months Ended September 30,	
	2020	2021
Operating activities		
Net income	$ 25,042	$ 55,391
Adjustments:		
Depreciation and impairment of property and equipment	9,366	8,340
Amortization and impairment of intangible assets	606	662
Stock-based compensation expense	9,768	11,422
Deferred income taxes	(280)	192
Gain on debt and equity securities, net	(3,055)	(9,792)
Other	875	(199)
Changes in assets and liabilities, net of effects of acquisitions:		
Accounts receivable	(1,079)	(3,276)
Income taxes, net	469	2,744
Other assets	(592)	(1,447)
Accounts payable	(269)	(874)
Accrued expenses and other liabilities	891	2,763
Accrued revenue share	277	386
Deferred revenue	428	406
Net cash provided by operating activities	42,447	66,718
Investing activities		
Purchases of property and equipment	(16,802)	(18,257)
Purchases of marketable securities	(104,932)	(95,106)
Maturities and sales of marketable securities	97,751	92,126
Purchases of non-marketable investments	(1,864)	(2,068)
Maturities and sales of non-marketable investments	598	590
Acquisitions, net of cash acquired, and purchases of intangible assets	(368)	(2,233)
Other investing activities	125	441
Net cash used in investing activities	(25,492)	(24,507)
Financing activities		
Net payments related to stock-based award activities	(4,073)	(7,239)
Repurchases of common and capital stock	(23,245)	(36,801)
Proceeds from issuance of debt, net of costs	11,761	13,949
Repayments of debt	(2,043)	(15,070)
Proceeds from sale of interest in consolidated entities, net	2,462	310
Net cash used in financing activities	(15,138)	(44,851)
Effect of exchange rate changes on cash and cash equivalents	(186)	(106)
Net increase (decrease) in cash and cash equivalents	1,631	(2,746)
Cash and cash equivalents at beginning of period	18,498	26,465
Cash and cash equivalents at end of period	$ 20,129	$ 23,719

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 September 30, 2021, the Consolidated Statements of Income for the three and nine months ended September 30, 2020 and 2021, the Consolidated Statements of Comprehensive Income for the three and nine months ended September 30, 2020 and 2021, the Consolidated Statements of Stockholders' Equity for the three and nine months ended September 30, 2020 and 2021 and the Consolidated Statements of Cash Flows for the nine months ended September 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 September 30, 2021, our results of operations for the three and nine months ended September 30, 2020 and 2021, and our cash flows for the nine months ended September 30, 2020 and 2021. The results of operations for the three and nine months ended September 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 $567 million as of December 31, 2020 and September 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 nine months ended September 30, 2021, the effect of this change in estimate was a reduction in depreciation expense of $591 million and $2.1 billion and an increase in net income of $460 million and $1.7 billion, or $0.69 and $2.50 per basic share and $0.68 and $2.46 per diluted share, for the three and nine months ended September 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 September 30,		Nine Months Ended September 30,	
	2020	2021	2020	2021
Google Search & other	$ 26,338	$ 37,926	$ 72,159	$ 105,650
YouTube ads	5,037	7,205	12,887	20,212
Google Network	5,720	7,999	15,679	22,396
Google advertising	37,095	53,130	100,725	148,258
Google other	5,478	6,754	15,037	19,871
Google Services total	42,573	59,884	115,762	168,129
Google Cloud	3,444	4,990	9,228	13,665
Other Bets	178	182	461	572
Hedging gains (losses)	(22)	62	178	(54)
Total revenues	$ 46,173	$ 65,118	$ 125,629	$ 182,312

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

	Three Months Ended September 30,				Nine Months Ended September 30,			
	2020		2021		2020		2021	
United States	$ 21,442	47 %	$ 29,824	46 %	$ 58,311	47 %	$ 83,064	46 %
EMEA[1]	13,924	30	19,839	30	38,132	30	55,954	31
APAC[1]	8,458	18	11,705	18	22,641	18	33,391	18
Other Americas[1]	2,371	5	3,688	6	6,367	5	9,957	5
Hedging gains (losses)	(22)	0	62	0	178	0	(54)	0
Total revenues	$ 46,173	100 %	$ 65,118	100 %	$ 125,629	100 %	$ 182,312	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 $3.5 billion as of December 31, 2020 and September 30, 2021, respectively. Of the total deferred revenue as of December 31, 2020, $2.1 billion was recognized as revenues during the nine months ended September 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 September 30, 2021, the amount not yet recognized as revenues from these commitments was $37.1 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 $22 million as of December 31, 2020 and September 30, 2021, respectively. As of December 31, 2020 and September 30, 2021, the fair value of these debt securities was $2.0 billion and $3.0 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 September 30, 2021					
	Adjusted Cost	Gross Unrealized Gains	Gross Unrealized Losses	Fair Value	Cash and Cash Equivalents	Marketable Securities
Level 2:						
Time deposits[1]	$ 5,277	$ 0	$ 0	$ 5,277	$ 5,277	$ 0
Government bonds	53,793	371	(93)	54,071	3	54,068
Corporate debt securities	35,156	362	(51)	35,467	0	35,467
Mortgage-backed and asset-backed securities	18,327	172	(44)	18,455	0	18,455
Total	$ 112,553	$ 905	$ (188)	$ 113,270	$ 5,280	$ 107,990

[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 $127 million and $109 million for the three months ended September 30, 2020 and 2021, respectively, and $690 million and $360 million for the nine months ended September 30, 2020 and 2021, respectively. We recognized gross realized losses of $8 million and $29 million for the three months ended September 30, 2020 and 2021, respectively, and $135 million and $180 million for the nine months ended September 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 September 30, 2021
Due in 1 year or less	$ 19,074
Due in 1 year through 5 years	73,675
Due in 5 years through 10 years	4,207
Due after 10 years	13,993
Total	$ 110,949

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 September 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	$ 28,507	$ (92)	$ 54	$ (1)	$ 28,561	$ (93)
Corporate debt securities	11,293	(19)	245	(2)	11,538	(21)
Mortgage-backed and asset-backed securities	8,371	(41)	188	(3)	8,559	(44)
Total	$ 48,171	$ (152)	$ 487	$ (6)	$ 48,658	$ (158)

During the three and nine months ended September 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 September 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 September 30,		Nine Months Ended September 30,	
	2020	2021	2020	2021
Net gain (loss) on equity securities sold during the period	$ (5)	$ (36)	$ 426	$ 545
Net unrealized gain (loss) on equity securities held as of the end of the period	1,904	2,157	2,114	9,185
Total gain (loss) recognized in other income (expense), net	$ 1,899	$ 2,121	$ 2,540	$ 9,730

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 September 30,		Nine Months Ended September 30,	
	2020	2021	2020	2021
Total sale price	$ 1,389	$ 1,199	$ 2,888	$ 4,553
Total initial cost	1,146	188	1,831	955
Cumulative net gains[1]	$ 243	$ 1,011	$ 1,057	$ 3,598

(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 September 30, 2021		
	Marketable Securities[2]	Non-Marketable Securities	Total
Total initial cost	$ 2,823	$ 14,944	$ 17,767
Cumulative net gain (loss)[1]	4,954	9,194	14,148
Carrying value[2]	$ 7,777	$ 24,138	$ 31,915

(1) Non-marketable equity securities cumulative net gain (loss) is comprised of $10.9 billion unrealized gains and $1.7 billion unrealized losses (including impairment).
(2) The long-term portion of marketable equity securities of $443 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 September 30, 2021	
	Cash and Cash Equivalents	Marketable Securities	Cash and Cash Equivalents	Marketable Securities
Level 1:				
Money market funds	$ 12,210	$ 0	$ 10,732	$ 0
Marketable equity securities[1][2]	0	5,470	0	7,430
	12,210	5,470	10,732	7,430
Level 2:				
Mutual funds	0	388	0	347
Total	$ 12,210	$ 5,858	$ 10,732	$ 7,777

(1) The balance as of December 31, 2020 and September 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 September 30, 2021 the long-term portion of marketable equity securities of $429 million and $443 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 September 30,		Nine Months Ended September 30,	
	2020	2021	2020	2021
Unrealized gains	$ 1,225	$ 1,260	$ 1,770	$ 6,245
Unrealized losses (including impairment)	(27)	(37)	(1,413)	(98)
Total unrealized gain (loss) for non-marketable equity securities	$ 1,198	$ 1,223	$ 357	$ 6,147

During the three months ended September 30, 2021, included in the $24.1 billion of non-marketable equity securities, $2.5 billion were measured at fair value resulting in a net unrealized gain of $1.2 billion.

Equity securities accounted for under the Equity Method

As of December 31, 2020 and September 30, 2021, equity securities accounted for under the equity method had a carrying value of approximately $1.4 billion and $1.5 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 September 30, 2021, the net accumulated gain on our foreign currency cash flow hedges before tax effect was $357 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 September 30, 2021
Derivatives Designated as Hedging Instruments:		
Foreign exchange contracts		
Cash flow hedges	$ 10,187	$ 16,058
Fair value hedges	$ 1,569	$ 2,502
Net investment hedges	$ 9,965	$ 9,934
Derivatives Not Designated as Hedging Instruments:		
Foreign exchange contracts	$ 39,861	$ 36,763
Other contracts	$ 2,399	$ 4,107

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 September 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	$ 505	$ 63	$ 568
Other contracts	Other current and non-current assets	0	65	65
Total		$ 505	$ 128	$ 633
Derivative Liabilities:				
Level 2:				
Foreign exchange contracts	Accrued expenses and other liabilities, current and non-current	$ 1	$ 141	$ 142
Other contracts	Accrued expenses and other liabilities, current and non-current	0	179	179
Total		$ 1	$ 320	$ 321

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 September 30,		Nine Months Ended September 30,	
	2020	2021	2020	2021
Derivatives in Cash Flow Hedging Relationship:				
Foreign exchange contracts				
Amount included in the assessment of effectiveness	$ (37)	$ 336	$ 331	$ 438
Amount excluded from the assessment of effectiveness	(23)	18	(20)	63
Derivatives in Net Investment Hedging Relationship:				
Foreign exchange contracts				
Amount included in the assessment of effectiveness	(371)	212	(412)	411
Total	$ (431)	$ 566	$ (101)	$ 912

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

	Gains (Losses) Recognized in Income			
	Three Months Ended September 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	$ 46,173	$ 2,146	$ 65,118	$ 2,033
Gains (Losses) on Derivatives in Cash Flow Hedging Relationship:				
Foreign exchange contracts				
Amount of gains (losses) reclassified from AOCI to income	$ (28)	$ 0	$ 65	$ 0
Amount excluded from the assessment of effectiveness recognized in earnings based on an amortization approach	6	0	(3)	0
Gains (Losses) on Derivatives in Fair Value Hedging Relationship:				
Foreign exchange contracts				
Hedged items	0	14	0	(69)
Derivatives designated as hedging instruments	0	(14)	0	69
Amount excluded from the assessment of effectiveness	0	0	0	2
Gains (Losses) on Derivatives in Net Investment Hedging Relationship:				
Foreign exchange contracts				
Amount excluded from the assessment of effectiveness	0	20	0	19
Gains (Losses) on Derivatives Not Designated as Hedging Instruments:				
Foreign exchange contracts	0	382	0	(148)
Other Contracts	0	(181)	0	(88)
Total gains (losses)	$ (22)	$ 221	$ 62	$ (215)

	Gains (Losses) Recognized in Income			
	Nine Months Ended September 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	$ 125,629	$ 3,820	$ 182,312	$ 9,503
Gains (Losses) on Derivatives in Cash Flow Hedging Relationship:				
Foreign exchange contracts				
Amount of gains (losses) reclassified from AOCI to income	$ 138	$ 0	$ (43)	$ 0
Amount excluded from the assessment of effectiveness recognized in earnings based on an amortization approach	40	0	(11)	0
Gains (Losses) on Derivatives in Fair Value Hedging Relationship:				
Foreign exchange contracts				
Hedged items	0	6	0	(41)
Derivatives designated as hedging instruments	0	(6)	0	41
Amount excluded from the assessment of effectiveness	0	2	0	6
Gains (Losses) on Derivatives in Net Investment Hedging Relationship:				
Foreign exchange contracts				
Amount excluded from the assessment of effectiveness	0	131	0	60
Gains (Losses) on Derivatives Not Designated as Hedging Instruments:				
Foreign exchange contracts	0	542	0	(552)
Other Contracts	0	(420)	0	93
Total gains (losses)	$ 178	$ 255	$ (54)	$ (393)

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 September 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	$ 667	$ (34)	$ 633	$ (129) [1]	$ (426)	$ (13)	$ 65

[1] The balances as of December 31, 2020 and September 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 September 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	$ 355	$ (34)	$ 321	$ (129) [2]	$ (1)	$ (173)	$ 18

[2] The balances as of December 31, 2020 and September 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 September 30, 2021, assets that can only be used to settle obligations of these VIEs were $5.7 billion and $6.8 billion, respectively, and the liabilities for which creditors only have recourse to the VIEs were $2.3 billion and $2.5 billion, respectively.

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 September 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 September 30, 2021.

Note 5. Debt

Short-Term Debt

We have a debt financing program of up to $10.0 billion through the issuance of commercial paper, which increased from $5.0 billion in September 2021. Net proceeds from this program are used for general corporate purposes. We had no commercial paper outstanding as of December 31, 2020 and September 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 September 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	1,696
Total debt				15,201	14,696
Unamortized discount and debt issuance costs				(169)	(159)
Less: Current portion of Notes[2]				(999)	0
Less: Current portion future finance lease payments, net[1][2]				(101)	(249)
Total long-term debt				$ 13,932	$ 14,288

(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 $12.3 billion as of December 31, 2020 and September 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 September 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 September 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 September 30, 2021
Land and buildings	$ 49,732	$ 57,268
Information technology assets	45,906	53,549
Construction in progress	23,111	22,494
Leasehold improvements	7,516	8,391
Furniture and fixtures	197	202
Property and equipment, gross	126,462	141,904
Less: accumulated depreciation	(41,713)	(47,273)
Property and equipment, net	$ 84,749	$ 94,631

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 September 30, 2021
European Commission fines[(1)]	$ 10,409	$ 10,073
Payables to brokers for unsettled investment trades	754	1,510
Accrued customer liabilities	3,118	3,039
Accrued purchases of property and equipment	2,197	2,309
Current operating lease liabilities	1,694	2,101
Other accrued expenses and current liabilities	10,459	11,081
Accrued expenses and other current liabilities	$ 28,631	$ 30,113

(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	193	1,346	264	1,803
Amounts excluded from the assessment of hedge effectiveness recorded in AOCI	0	0	(20)	(20)
Amounts reclassified from AOCI	0	(391)	(114)	(505)
Other comprehensive income (loss)	193	955	130	1,278
Balance as of September 30, 2020	$ (1,810)	$ 1,767	$ 89	$ 46

	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	(671)	(699)	366	(1,004)
Amounts excluded from the assessment of hedge effectiveness recorded in AOCI	0	0	63	63
Amounts reclassified from AOCI	0	(121)	21	(100)
Other comprehensive income (loss)	(671)	(820)	450	(1,041)
Balance as of September 30, 2021	$ (1,535)	$ 792	$ 335	$ (408)

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 September 30,		Nine Months Ended September 30,	
AOCI Components	Location	2020	2021	2020	2021
Unrealized gains (losses) on available-for-sale investments					
	Other income (expense), net	$ 93	$ 73	$ 496	$ 155
	Benefit (provision) for income taxes	(20)	(16)	(105)	(34)
	Net of income tax	73	57	391	121
Unrealized gains (losses) on cash flow hedges					
Foreign exchange contracts	Revenue	(28)	65	138	(43)
Interest rate contracts	Other income (expense), net	1	1	4	4
	Benefit (provision) for income taxes	4	(6)	(28)	18
	Net of income tax	(23)	60	114	(21)
Total amount reclassified, net of income tax		$ 50	$ 117	$ 505	$ 100

Other Income (Expense), Net

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

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2020	2021	2020	2021
Interest income	$ 460	$ 387	$ 1,479	$ 1,121
Interest expense[1]	(48)	(77)	(82)	(229)
Foreign currency exchange gain (loss), net	(84)	(139)	(257)	(77)
Gain (loss) on debt securities, net	116	37	515	62
Gain (loss) on equity securities, net	1,899	2,121	2,540	9,730
Performance fees	(135)	(492)	(204)	(1,680)
Income (loss) and impairment from equity method investments, net	26	188	46	285
Other	(88)	8	(217)	291
Other income (expense), net	$ 2,146	$ 2,033	$ 3,820	$ 9,503

[1] Interest expense is net of interest capitalized of $53 million and $40 million for the three months ended September 30, 2020 and 2021, respectively, and $162 million and $132 million for the nine months ended September 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 nine months ended September 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	1,306	47	102	1,455
Foreign currency translation and other adjustments	4	0	(11)	(7)
Balance as of September 30, 2021	$ 19,827	$ 2,004	$ 792	$ 22,623

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 September 30, 2021		
	Gross Carrying Amount	Accumulated Amortization	Net Carrying Amount
Patents and developed technology	$ 4,818	$ 4,045	$ 773
Customer relationships	483	118	365
Trade names and other	946	535	411
Total	$ 6,247	$ 4,698	$ 1,549

For all intangible assets acquired and purchased during the nine months ended September 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 4.3 years, and trade names and other have a weighted-average useful life of 9.9 years.

Amortization expense relating to purchased intangible assets was $189 million and $219 million for the three months ended September 30, 2020 and 2021, respectively, and $587 million and $651 million for the nine months ended September 30, 2020 and 2021, respectively.

As of September 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	$ 214
2022	512
2023	241
2024	215
2025	81
Thereafter	286
Total	$ 1,549

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 September 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, other proceedings, and consent decrees 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, other proceedings, and consent decrees 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 April 2021, the Board of Directors of Alphabet authorized the company to repurchase up to $50.0 billion of its Class C 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 September 30, 2021, $30.8 billion remains available for repurchase of Class A and Class C shares under the amended authorization. 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.

In accordance with the authorization of the Board of Directors of Alphabet, during the three and nine months ended September 30, 2021, we repurchased and subsequently retired 4.6 million and 15.7 million aggregate shares for $12.6 billion and $36.8 billion, respectively. Of the aggregate amount repurchased and subsequently retired during the three months ended September 30, 2021, 0.5 million shares were Class A stock for $1.5 billion.

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 September 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	$ 4,973	$ 763	$ 5,511	$ 8,548	$ 1,291	$ 9,097
Denominator						
Number of shares used in per share computation	300,411	46,108	332,930	300,519	45,404	319,835
Basic net income per share	$ 16.55	$ 16.55	$ 16.55	$ 28.44	$ 28.44	$ 28.44
Diluted net income per share:						
Numerator						
Allocation of undistributed earnings for basic computation	$ 4,973	$ 763	$ 5,511	$ 8,548	$ 1,291	$ 9,097
Reallocation of undistributed earnings as a result of conversion of Class B to Class A shares	763	0	0	1,291	0	0
Reallocation of undistributed earnings	(53)	(7)	53	(156)	(20)	156
Allocation of undistributed earnings	$ 5,683	$ 756	$ 5,564	$ 9,683	$ 1,271	$ 9,253
Denominator						
Number of shares used in basic computation	300,411	46,108	332,930	300,519	45,404	319,835
Weighted-average effect of dilutive securities						
Add:						
Conversion of Class B to Class A common shares outstanding	46,108	0	0	45,404	0	0
Restricted stock units and other contingently issuable shares	47	0	6,355	14	0	10,747
Number of shares used in per share computation	346,566	46,108	339,285	345,937	45,404	330,582
Diluted net income per share	$ 16.40	$ 16.40	$ 16.40	$ 27.99	$ 27.99	$ 27.99

	Nine Months Ended September 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	$ 11,004	$ 1,697	$ 12,341	$ 24,867	$ 3,776	$ 26,748
Denominator						
Number of shares used in per share computation	299,934	46,266	336,361	300,482	45,622	323,208
Basic net income per share	$ 36.69	$ 36.69	$ 36.69	$ 82.76	$ 82.76	$ 82.76
Diluted net income per share:						
Numerator						
Allocation of undistributed earnings for basic computation	$ 11,004	$ 1,697	$ 12,341	$ 24,867	$ 3,776	$ 26,748
Reallocation of undistributed earnings as a result of conversion of Class B to Class A shares	1,697	0	0	3,776	0	0
Reallocation of undistributed earnings	(103)	(14)	103	(424)	(56)	424
Allocation of undistributed earnings	$ 12,598	$ 1,683	$ 12,444	$ 28,219	$ 3,720	$ 27,172
Denominator						
Number of shares used in basic computation	299,934	46,266	336,361	300,482	45,622	323,208
Weighted-average effect of dilutive securities						
Add:						
Conversion of Class B to Class A common shares outstanding	46,266	0	0	45,622	0	0
Restricted stock units and other contingently issuable shares	105	0	5,715	16	0	10,073
Number of shares used in per share computation	346,305	46,266	342,076	346,120	45,622	333,281
Diluted net income per share	$ 36.38	$ 36.38	$ 36.38	$ 81.53	$ 81.53	$ 81.53

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 September 30, 2020 and 2021, total stock-based compensation ("SBC") expense was $3.3 billion and $3.9 billion, including amounts associated with awards we expect to settle in Alphabet stock of $3.1 billion and $3.8 billion, respectively. For the nine months ended September 30, 2020 and 2021, total SBC expense was $10.1 billion and $11.7 billion, including amounts associated with awards we expect to settle in Alphabet stock of $9.6 billion and $11.2 billion, respectively.

Stock-Based Award Activities

The following table summarizes the activities for our unvested restricted stock units ("RSUs") in Alphabet stock for the nine months ended September 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	9,849,733	$ 1,883.76
Vested	(7,984,196)	$ 1,334.16
Forfeited/canceled	(1,471,948)	$ 1,411.50
Unvested as of September 30, 2021	19,682,382	$ 1,538.30

As of September 30, 2021, there was $28.2 billion of unrecognized compensation cost related to unvested employee RSUs. This amount is expected to be recognized over a weighted-average period of 2.6 years.

Note 13. Income Taxes

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

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2020	2021	2020	2021
Provision for income taxes	$ 2,112	$ 4,128	$ 4,351	$ 10,941
Effective tax rate	15.8 %	17.9 %	14.8 %	16.5 %

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 $5.3 billion as of December 31, 2020 and September 30, 2021, respectively. Our total unrecognized tax benefits that, if recognized, would affect our effective tax rate were $2.6 billion and $3.7 billion as of December 31, 2020 and September 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 September 30,		Nine Months Ended September 30,	
	2020	2021	2020	2021
Revenues:				
Google Services	$ 42,573	$ 59,884	$ 115,762	$ 168,129
Google Cloud	3,444	4,990	9,228	13,665
Other Bets	178	182	461	572
Hedging gains (losses)	(22)	62	178	(54)
Total revenues	$ 46,173	$ 65,118	$ 125,629	$ 182,312

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2020	2021	2020	2021
Operating income (loss):				
Google Services	$ 14,453	$ 23,973	$ 35,540	$ 65,862
Google Cloud	(1,208)	(644)	(4,364)	(2,209)
Other Bets	(1,103)	(1,288)	(3,340)	(3,831)
Corporate costs, unallocated	(929)	(1,010)	(2,263)	(2,993)
Total income from operations	$ 11,213	$ 21,031	$ 25,573	$ 56,829

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 September 30, 2021
Long-lived assets:		
United States	$ 69,315	$ 77,281
International	27,645	30,268
Total long-lived assets	$ 96,960	$ 107,549

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.

Through the third quarter 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 impact of COVID-19 in the prior year, 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 September 30,	
	2020	2021
Revenues	$ 46,173	$ 65,118
Change in revenues year over year	14 %	41 %
Change in constant currency revenues year over year	15 %	39 %
Operating income	$ 11,213	$ 21,031
Operating margin	24 %	32 %
Other income (expense), net	$ 2,146	$ 2,033
Net Income	$ 11,247	$ 18,936
Diluted EPS	$ 16.40	$ 27.99

- Total revenues were $65.1 billion, an increase of 41% year over year, primarily driven by an increase in Google Services segment revenues of $17.3 billion or 41% and an increase in Google Cloud segment revenues of $1.5 billion or 45%. 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 $29.8 billion, $19.8 billion, $11.7 billion, and $3.7 billion, respectively.

- Total cost of revenues was $27.6 billion, an increase of 31% year over year. TAC was $11.5 billion, an increase of 41% year over year, primarily driven by an increase in revenues subject to TAC. Other cost of revenues were $16.1 billion, an increase of 24% 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 $16.5 billion, an increase of 19% year over year, primarily driven by headcount growth and increases in advertising and promotional expenses.

Other information

- Operating cash flow was $25.5 billion for the three months ended September 30, 2021.
- Capital expenditures, which primarily included investments in technical infrastructure, were $6.8 billion for the three months ended September 30, 2021.
- Number of employees was 150,028 as of September 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 September 30,		Nine Months Ended September 30,	
	2020	2021	2020	2021
Google Search & other	$ 26,338	$ 37,926	$ 72,159	$ 105,650
YouTube ads	5,037	7,205	12,887	20,212
Google Network	5,720	7,999	15,679	22,396
Google advertising	37,095	53,130	100,725	148,258
Google other	5,478	6,754	15,037	19,871
Google Services total	42,573	59,884	115,762	168,129
Google Cloud	3,444	4,990	9,228	13,665
Other Bets	178	182	461	572
Hedging gains (losses)	(22)	62	178	(54)
Total revenues	$ 46,173	$ 65,118	$ 125,629	$ 182,312

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 $11.6 billion and $33.5 billion from the three and nine months ended September 30, 2020 to the three and nine months ended September 30, 2021, respectively. The overall growth was primarily driven by interrelated factors including 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 also contributed to the year-over-year increase.

YouTube ads

YouTube ads revenues increased $2.2 billion and $7.3 billion from the three and nine months ended September 30, 2020 to the three and nine months ended September 30, 2021, respectively. Growth was driven by our direct response and brand advertising products. Growth for our direct response advertising products was primarily driven by increased advertiser spending as well as improvements to ad formats and delivery. Growth for our brand advertising products for the three months ended September 30, 2021 was primarily driven by increased spending by our advertisers. For the nine months ended September 30, 2021, the adverse effect of COVID-19 on prior year comparable period brand advertising revenues also contributed to the year-over-year increase.

Google Network

Google Network revenues increased $2.3 billion from the three months ended September 30, 2020 to the three months ended September 30, 2021. The increase was primarily driven by strength in AdMob, AdSense and Google Ad Manager.

Google Network revenues increased $6.7 billion from the nine months ended September 30, 2020 to the nine months ended September 30, 2021. The increase was primarily driven by strength in AdMob, Google Ad Manager

and AdSense. The adverse effect of COVID-19 on prior year comparable period revenues also contributed to the year-over-year increase.

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 September 30,	Nine Months Ended September 30,
	2021	2021
Paid clicks change	22%	24%
Cost-per-click change	18%	17%

Paid clicks increased from the three and nine months ended September 30, 2020 to the three and nine months ended September 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; and improvements we have made in ad formats and delivery. For the nine months ended September 30, 2021 the adverse effect of COVID-19 on the prior year comparable period also contributed to the increase in paid clicks.

The increase in cost-per-click from the three and nine months ended September 30, 2020 to the three and nine months ended September 30, 2021 was driven by a combination of factors including changes in device mix, geographic mix, changes in advertiser spending, ongoing product changes, product mix, property mix, and fluctuations of the U.S. dollar compared to certain foreign currencies, as well as the adverse effect of COVID-19 on the prior year comparable period.

Impressions and cost-per-impression

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

	Three Months Ended September 30,	Nine Months Ended September 30,
	2021	2021
Impressions change	2%	3 %
Cost-per-impression change	39%	39%

Impressions increased from the three and nine months ended September 30, 2020 to the three and nine months ended September 30, 2021, primarily driven by growth in AdMob, partially offset by a decline in impressions related to AdSense. The increase in cost-per-impression from the three and nine months ended September 30, 2020 to the three and nine months ended September 30, 2021 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 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 $1.3 billion from the three months ended September 30, 2020 to the three months ended September 30, 2021. The growth was primarily driven by YouTube non-advertising, largely due to an increase in paid subscribers, as well as Devices and Services, reflecting the inclusion of Fitbit revenues as the acquisition closed in January 2021.

Google other revenues increased $4.8 billion from the nine months ended September 30, 2020 to the nine months ended September 30, 2021. The growth was primarily driven by YouTube non-advertising and Devices and Services, followed by Google Play. Growth for YouTube non-advertising was largely due to an increase in paid subscribers. Growth for Devices and Services reflects the inclusion of Fitbit revenues. 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 seasonality, new product and service launches, changes in pricing, as well as market dynamics.

Google Cloud

Our Google Cloud revenues increased $1.5 billion and $4.4 billion from the three and nine months ended September 30, 2020 to the three and nine months ended September 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 September 30,		Nine Months Ended September 30,	
	2020	2021	2020	2021
United States	47 %	46 %	47 %	46 %
EMEA	30 %	30 %	30 %	31 %
APAC	18 %	18 %	18 %	18 %
Other Americas	5 %	6 %	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 September 30,		Nine Months Ended September 30,	
	2020	2021	2020	2021
EMEA revenues	$ 13,924	$ 19,839	$ 38,132	$ 55,954
Exclude foreign exchange effect on current period revenues using prior year rates	(250)	(490)	346	(2,844)
EMEA constant currency revenues	$ 13,674	$ 19,349	$ 38,478	$ 53,110
Prior period EMEA revenues	$ 12,565	$ 13,924	$ 36,546	$ 38,132
EMEA revenue percentage change	11 %	42 %	4 %	47 %
EMEA constant currency revenue percentage change	9 %	39 %	5 %	39 %
APAC revenues	$ 8,458	$ 11,705	$ 22,641	$ 33,391
Exclude foreign exchange effect on current period revenues using prior year rates	1	(8)	167	(721)
APAC constant currency revenues	$ 8,459	$ 11,697	$ 22,808	$ 32,670
Prior period APAC revenues	$ 6,814	$ 8,458	$ 19,446	$ 22,641
APAC revenue percentage change	24 %	38 %	16 %	47 %
APAC constant currency revenue percentage change	24 %	38 %	17 %	44 %
Other Americas revenues	$ 2,371	$ 3,688	$ 6,367	$ 9,957
Exclude foreign exchange effect on current period revenues using prior year rates	304	(117)	640	(38)
Other Americas constant currency revenues	$ 2,675	$ 3,571	$ 7,007	$ 9,919
Prior period Other Americas revenues	$ 2,290	$ 2,371	$ 6,320	$ 6,367
Other Americas revenue percentage change	4 %	56 %	1 %	56 %
Other Americas constant currency revenue percentage change	17 %	51 %	11 %	56 %
United States revenues	$ 21,442	$ 29,824	$ 58,311	$ 83,064
United States revenue percentage change	15 %	39 %	10 %	42 %
Hedging gains (losses)	$ (22)	$ 62	$ 178	$ (54)
Total revenues	$ 46,173	$ 65,118	$ 125,629	$ 182,312
Total constant currency revenues	$ 46,250	$ 64,441	$ 126,604	$ 178,763
Prior period revenues, excluding hedging effect[1]	$ 40,380	$ 46,195	$ 115,418	$ 125,451
Total revenue percentage change	14 %	41 %	9 %	45 %
Total constant currency revenue percentage change	15 %	39 %	10 %	42 %

[1] Total revenues and hedging gains (losses) were $40,499 million and $119 million, respectively, for the three months ended September 30, 2019 and $115,782 million and $364 million, respectively, for the nine months ended September 30, 2019.

EMEA revenue percentage change from the three months ended September 30, 2020 to the three months ended September 30, 2021 was favorably affected by foreign currency exchange rates, primarily due to the U.S. dollar weakening relative to the British pound and Euro. EMEA revenue percentage change from the nine months ended September 30, 2020 to the nine months ended September 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 months ended September 30, 2020 to the three months ended September 30, 2021 was not materially affected by foreign currency exchange rates. APAC revenue percentage change from the nine months ended September 30, 2020 to the nine months ended September 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 September 30, 2020 to the three months ended September 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 nine months ended September 30, 2020 to the nine months ended September 30, 2021 was not materially affected by changes in foreign currency exchange rates, as the effect of the U.S. dollar weakening relative to the Canadian dollar was largely offset by the U.S. dollar strengthening relative to the Brazilian real.

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 September 30,		Nine Months Ended September 30,	
	2020	2021	2020	2021
TAC	$ 8,166	$ 11,498	$ 22,312	$ 32,139
Other cost of revenues	12,951	16,123	36,340	45,812
Total cost of revenues	$ 21,117	$ 27,621	$ 58,652	$ 77,951
Total cost of revenues as a percentage of revenues	45.7 %	42.4 %	46.7 %	42.8 %

Cost of revenues increased $6.5 billion from the three months ended September 30, 2020 to the three months ended September 30, 2021. The increase was due to increases in TAC and other cost of revenues of $3.3 billion and $3.2 billion, respectively. Cost of revenues increased $19.3 billion from the nine months ended September 30, 2020 to the nine months ended September 30, 2021. The increase was due to increases in TAC and other cost of revenues of $9.8 billion and $9.5 billion, respectively.

The increase in other cost of revenues from the three and nine months ended September 30, 2020 to the three and nine months ended September 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 nine months ended September 30, 2020 to the three and nine months ended September 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 22.0% to 21.6% from the three months ended September 30, 2020 to the three months ended September 30, 2021 and decreased from 22.2% to 21.7% from the nine months ended September 30, 2020 to the nine months ended September 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 nine months ended September 30, 2020 to the three and nine months ended September 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 September 30,		Nine Months Ended September 30,	
	2020	2021	2020	2021
Research and development expenses	$ 6,856	$ 7,694	$ 20,551	$ 22,854
Research and development expenses as a percentage of revenues	14.8 %	11.8 %	16.4 %	12.5 %

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 $838 million from the three months ended September 30, 2020 to the three months ended September 30, 2021. The increase was primarily due to an increase in compensation expenses of $725 million, largely resulting from a 12% increase in headcount.

R&D expenses increased $2.3 billion from the nine months ended September 30, 2020 to the nine months ended September 30, 2021. The increase was primarily due to an increase in compensation expenses of $2.4 billion, largely resulting from an 11% increase in headcount. This increase was partially offset by a reduction in depreciation expense of $430 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 September 30,		Nine Months Ended September 30,	
	2020	2021	2020	2021
Sales and marketing expenses	$ 4,231	$ 5,516	$ 12,632	$ 15,308
Sales and marketing expenses as a percentage of revenues	9.2 %	8.5 %	10.1 %	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 $1.3 billion from the three months ended September 30, 2020 to the three months ended September 30, 2021, primarily driven by an increase in compensation expenses of $612 million and in advertising and promotional activities of $558 million. The increase in compensation expenses was largely due to a 16% increase in headcount. The increase in advertising and promotional activities was driven by both increased spending in the current period and a reduction in spending in the prior year comparable period due to COVID-19.

Sales and marketing expenses increased $2.7 billion from the nine months ended September 30, 2020 to the nine months ended September 30, 2021, primarily driven by an increase in compensation expenses of $1.5 billion and advertising and promotional activities of $1.2 billion. The increase in compensation expenses was largely due to a 12% increase in headcount. The increase in advertising and promotional activities was driven by both increased spending in the current period and a reduction in spending in the prior year comparable period due to 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 September 30,		Nine Months Ended September 30,	
	2020	2021	2020	2021
General and administrative expenses	$ 2,756	$ 3,256	$ 8,221	$ 9,370
General and administrative expenses as a percentage of revenues	6.0 %	5.0 %	6.5 %	5.1 %

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 $500 million from the three months ended September 30, 2020 to the three months ended September 30, 2021. The increase was primarily driven by a $314 million increase in charges related to legal matters and a $179 million increase in compensation expenses, largely resulting from a 13% increase in headcount.

General and administrative expenses increased $1.1 billion from the nine months ended September 30, 2020 to the nine months ended September 30, 2021. The increase was primarily driven by a $1.3 billion increase in charges relating to legal matters and a $409 million increase in compensation expenses, largely resulting from a 13% increase in headcount. These increases were partially offset by a $844 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 September 30,		Nine Months Ended September 30,	
	2020	2021	2020	2021
Operating income (loss):				
Google Services	$ 14,453	$ 23,973	$ 35,540	$ 65,862
Google Cloud	(1,208)	(644)	(4,364)	(2,209)
Other Bets	(1,103)	(1,288)	(3,340)	(3,831)
Corporate costs, unallocated	(929)	(1,010)	(2,263)	(2,993)
Total income from operations	$ 11,213	$ 21,031	$ 25,573	$ 56,829

Google Services

Google Services operating income increased $9.5 billion from the three months ended September 30, 2020 to the three months ended September 30, 2021. The increase was due to growth in revenues partially offset by increases in TAC, content acquisition costs, compensation expenses and advertising and promotional 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 effect of COVID-19 on the prior year comparable period results affected the year-over-year increase in operating income.

Google Services operating income increased $30.3 billion from the nine months ended September 30, 2020 to the nine months ended September 30, 2021. The increase was due to growth in revenues partially offset by increases in TAC, content acquisition costs, compensation expenses, charges related to certain legal matters and advertising and promotional 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 effect of COVID-19 on prior year comparable period results affected the year-over-year increase in operating income.

Google Cloud

Google Cloud operating loss decreased $564 million and $2.2 billion from the three and nine months ended September 30, 2020 to the three and nine months ended September 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 $185 million and $491 million from the three and nine months ended September 30, 2020 to the three and nine months ended September 30, 2021, respectively. The increase in operating loss for the three and nine months ended September 30, 2021 was primarily driven by increases in compensation expenses, including an increase in valuation-based compensation charges during the second quarter of 2021.

Other Income (Expense), Net

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

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2020	2021	2020	2021
Other income (expense), net	$ 2,146	$ 2,033	$ 3,820	$ 9,503

Other income (expense), net, decreased $113 million from the three months ended September 30, 2020 to the three months ended September 30, 2021. The change was primarily driven by an increase in accrued performance

fees related to certain investments of $357 million during the three months ended September 30, 2021, offset by increases in net unrealized gains recognized for our equity securities of $222 million and income from equity method investments of $162 million.

Other income (expense), net, increased $5.7 billion from the nine months ended September 30, 2020 to the nine months ended September 30, 2021. The change was primarily driven by increases in net unrealized gains recognized for our marketable and non-marketable equity securities of $1.4 billion and $5.8 billion, respectively, during the nine months ended September 30, 2021, partially offset by an increase in accrued performance fees related to certain investments of $1.5 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 September 30,		Nine Months Ended September 30,	
	2020	2021	2020	2021
Provision for income taxes	$ 2,112	$ 4,128	$ 4,351	$ 10,941
Effective tax rate	15.8 %	17.9 %	14.8 %	16.5 %

Our provision for income taxes and our effective tax rate increased from the three months ended September 30, 2020 to the three months ended September 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 and an increase in unrecognized tax benefits, partially offset by an increase in the stock-based compensation related tax benefit.

Our provision for income taxes and our effective tax rate increased from the nine months ended September 30, 2020 to the nine months ended September 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 stock-based compensation related tax benefit, and the U.S. federal Foreign-Derived Intangible Income tax deduction 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 September 30, 2021, we had $142.0 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):

	Nine Months Ended September 30,	
	2020	2021
Net cash provided by operating activities	$ 42,447	$ 66,718
Net cash used in investing activities	$ (25,492)	$ (24,507)
Net cash used in financing activities	$ (15,138)	$ (44,851)

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 nine months ended September 30, 2020 to the nine months ended September 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 decreased from the nine months ended September 30, 2020 to the nine months ended September 30, 2021 primarily due to decreases in purchases of marketable securities offset by a decrease in maturities and sales of marketable securities and an increase in purchases of property and equipment.

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 common and capital stock, net payments related to stock-based award activities, and repayments of debt.

Net cash used in financing activities increased from the nine months ended September 30, 2020 to the nine months ended September 30, 2021 primarily due to increases in cash payments for repurchases of common and capital stock, net payments related to stock-based award activities, and repayment of debt.

.iquidity 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 September 30, 2021, we had long-term taxes payable of $5.6 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 $10.0 billion through the issuance of commercial paper, which increased from $5.0 billion in September 2021. Net proceeds from this program are used for general corporate purposes. As of September 30, 2021, we had no commercial paper outstanding. As of September 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 September 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 April 2021, the Board of Directors of Alphabet authorized the company to repurchase up to $50.0 billion of its Class C 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. In accordance with the authorization of the Board of Directors of Alphabet, during the three and nine months ended September 30, 2021, we repurchased and subsequently retired 4.6 million and 15.7 million aggregate shares for $12.6 billion and $36.8 billion, respectively. Of the aggregate amount repurchased and subsequently retired during the three months ended September 30, 2021, 0.5 million shares were Class A stock for $1.5 billion. As of September 30, 2021, $30.8 billion remains available for repurchase of Class A and Class C shares under the amended authorization. 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. In September 2021 we exercised our option to purchase St. John's Terminal in New York City for approximately $2.1 billion, which is expected to close in the first quarter of 2022.

During the nine months ended September 30, 2020 and 2021, we spent $16.8 billion and $18.3 billion on capital expenditures and recognized total operating lease assets of $2.2 billion and $2.2 billion, respectively. As of September 30, 2021, the amount of total future lease payments under operating leases, which had a weighted average remaining lease term of 8 years, was $15.5 billion. As of September 30, 2021, we have entered into leases that have not yet commenced with future lease payments of $6.3 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 nine months ended September 30, 2020 and 2021, our depreciation and impairment expenses on property and equipment were $9.4 billion and $8.3 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 $2.1 billion for the nine months ended September 30, 2021. For the nine months ended September 30, 2020 and 2021, our operating lease expenses (including variable lease costs), were $2.1 billion and $2.5 billion, respectively. Finance leases were not material for the nine months ended September 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 September 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. There have been no changes in our internal control over financial reporting that occurred during the quarter ended September 30, 2021 that have materially affected, or are reasonably likely to materially affect, our internal control over financial reporting. However, as the phased implementation of the new ERP system continues, we will change our processes and procedures, which in turn, could result in changes to our internal control over financial reporting. As such changes occur, we will evaluate quarterly whether such changes 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 September 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 September 30, 2021, Larry Page and Sergey Brin beneficially owned approximately 85.5% of our outstanding Class B common stock, which represented approximately 51.3% 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 A common stock and Class C capital stock during the quarter ended September 30, 2021.

Period	Total Number of Class A Shares Purchased (in thousands) [1]	Total Number of Class C Shares Purchased (in thousands) [1]	Average Price Paid per Class A Share [2]	Average Price Paid per Class C 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)
July 1 - 31	0	1,513	$ 0.00	$ 2,632.22	1,513	$ 39,471
August 1 - 31	270	1,378	$ 2,772.38	$ 2,779.47	1,648	$ 34,895
September 1 - 30	255	1,165	$ 2,842.50	$ 2,854.69	1,420	$ 30,844
Total	525	4,056			4,581	

[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
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)		

* 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.

October 26, 2021 By: /s/ RUTH M. PORAT

Ruth M. Porat
Senior Vice President and Chief Financial Officer

ALPHABET INC.

October 26, 2021 By: /s/ AMIE THUENER O'TOOLE

Amie Thuener O'Toole
Vice President and Chief Accounting Officer

Exhibit 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

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: October 26, 2021

/S/ SUNDAR PICHAI
Sundar Pichai
Chief Executive Officer
(Principal Executive Officer)

Exhibit 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

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: October 26, 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 September 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: October 26, 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 September 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: October 26, 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.