

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, 2022
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:

<u>Title of each class</u>	<u>Trading Symbol(s)</u>	<u>Name of each exchange on which registered</u>
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	<input checked="" type="checkbox"/>	Accelerated filer	<input type="checkbox"/>
Non-accelerated filer	<input type="checkbox"/>	Smaller reporting company	<input type="checkbox"/>
Emerging growth company	<input type="checkbox"/>		

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 18, 2022, there were 5,973 million shares of Alphabet's Class A stock outstanding, 884 million shares of Alphabet's Class B stock outstanding, and 6,086 million shares of Alphabet's Class C stock outstanding.

Alphabet Inc.
Form 10-Q
For the Quarterly Period Ended September 30, 2022

TABLE OF CONTENTS

	<u>Page No.</u>
Note About Forward-Looking Statements	3
 PART I. FINANCIAL INFORMATION	
Item 1 Financial Statements	5
Consolidated Balance Sheets - December 31, 2021 and September 30, 2022	5
Consolidated Statements of Income - Three and Nine Months Ended September 30, 2021 and 2022	6
Consolidated Statements of Comprehensive Income - Three and Nine Months Ended September 30, 2021 and 2022	7
Consolidated Statements of Stockholders' Equity - Three and Nine Months Ended September 30, 2021 and 2022	8
Consolidated Statements of Cash Flows - Nine Months Ended September 30, 2021 and 2022	10
Notes to Consolidated Financial Statements	11
Item 2 Management's Discussion and Analysis of Financial Condition and Results of Operations	34
Item 3 Quantitative and Qualitative Disclosures About Market Risk	47
Item 4 Controls and Procedures	47
 PART II. OTHER INFORMATION	
Item 1 Legal Proceedings	49
Item 1A Risk Factors	49
Item 2 Unregistered Sales of Equity Securities and Use of Proceeds	50
Item 5 Other Information	49
Item 6 Exhibits	52
Signatures	53

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 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;
- the growth of our business and revenues and our expectations about the factors that influence our success and trends in our business;
- fluctuations in our revenue growth rate and operating margin and various factors contributing to such fluctuations;
- our expectation that the continuing 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 and strategic investments;
- 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, 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;
- the expected timing, amount, and effect of Alphabet Inc.'s share repurchases;
- our long-term sustainability and diversity goals;
- the unpredictability of the ongoing broader economic effects resulting from the war in Ukraine on our future financial 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, 2021, and including material changes reflected 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, 2021, and including material changes reflected 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 par value per share amounts)

	As of December 31, 2021	As of September 30, 2022 (unaudited)
Assets		
Current assets:		
Cash and cash equivalents	\$ 20,945	\$ 21,984
Marketable securities	118,704	94,275
Total cash, cash equivalents, and marketable securities	139,649	116,259
Accounts receivable, net	39,304	34,697
Income taxes receivable, net	966	1,479
Inventory	1,170	3,156
Other current assets	7,054	10,518
Total current assets	188,143	166,109
Non-marketable securities	29,549	30,419
Deferred income taxes	1,284	2,991
Property and equipment, net	97,599	108,363
Operating lease assets	12,959	13,677
Intangible assets, net	1,417	2,192
Goodwill	22,956	28,834
Other non-current assets	5,361	5,670
Total assets	\$ 359,268	\$ 358,255
Liabilities and Stockholders' Equity		
Current liabilities:		
Accounts payable	\$ 6,037	\$ 6,303
Accrued compensation and benefits	13,889	12,366
Accrued expenses and other current liabilities	31,236	35,038
Accrued revenue share	8,996	7,662
Deferred revenue	3,288	3,585
Income taxes payable, net	808	1,025
Total current liabilities	64,254	65,979
Long-term debt	14,817	14,653
Deferred revenue, non-current	535	594
Income taxes payable, non-current	9,176	8,572
Deferred income taxes	5,257	476
Operating lease liabilities	11,389	11,984
Other long-term liabilities	2,205	2,371
Total liabilities	107,633	104,629
Contingencies (Note 9)		
Stockholders' equity:		
Preferred stock, \$0.001 par value per share, 100 shares authorized; no shares issued and outstanding	0	0
Class A, Class B, and Class C stock and additional paid-in capital, \$0.001 par value per share: 300,000 shares authorized (Class A 180,000, Class B 60,000, Class C 60,000); 13,242 (Class A 6,015, Class B 893, Class C 6,334) and 12,971 (Class A 5,978, Class B 884, Class C 6,109) shares issued and outstanding	61,774	66,258
Accumulated other comprehensive income (loss)	(1,623)	(8,852)
Retained earnings	191,484	196,220
Total stockholders' equity	251,635	253,626
Total liabilities and stockholders' equity	\$ 359,268	\$ 358,255

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,	
	2021	2022	2021	2022
Revenues	\$ 65,118	\$ 69,092	\$ 182,312	\$ 206,788
Costs and expenses:				
Cost of revenues	27,621	31,158	77,951	90,861
Research and development	7,694	10,273	22,854	29,233
Sales and marketing	5,516	6,929	15,308	19,384
General and administrative	3,256	3,597	9,370	10,628
Total costs and expenses	44,087	51,957	125,483	150,106
Income from operations	21,031	17,135	56,829	56,682
Other income (expense), net	2,033	(902)	9,503	(2,501)
Income before income taxes	23,064	16,233	66,332	54,181
Provision for income taxes	4,128	2,323	10,941	7,833
Net income	\$ 18,936	\$ 13,910	\$ 55,391	\$ 46,348
Basic net income per share of Class A, Class B, and Class C stock	\$ 1.42	\$ 1.07	\$ 4.14	\$ 3.53
Diluted net income per share of Class A, Class B, and Class C stock	\$ 1.40	\$ 1.06	\$ 4.08	\$ 3.50

See accompanying notes.

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

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2021	2022	2021	2022
Net income	\$ 18,936	\$ 13,910	\$ 55,391	\$ 46,348
Other comprehensive loss:				
Change in foreign currency translation adjustment	(614)	(2,175)	(671)	(3,801)
Available-for-sale investments:				
Change in net unrealized gains (losses)	(159)	(1,800)	(699)	(5,204)
Less: reclassification adjustment for net (gains) losses included in net income	(57)	362	(121)	743
Net change, net of income tax benefit (expense) of \$63, \$409, \$235 and \$1,269	(216)	(1,438)	(820)	(4,461)
Cash flow hedges:				
Change in net unrealized gains (losses)	292	1,136	429	2,165
Less: reclassification adjustment for net (gains) losses included in net income	(60)	(547)	21	(1,132)
Net change, net of income tax benefit (expense) of \$(54), \$(159), \$(89) and \$(228)	232	589	450	1,033
Other comprehensive loss	(598)	(3,024)	(1,041)	(7,229)
Comprehensive income	\$ 18,338	\$ 10,886	\$ 54,350	\$ 39,119

See accompanying notes.

Alphabet Inc.
CONSOLIDATED STATEMENTS OF STOCKHOLDERS' EQUITY
(In millions; unaudited)

Three Months Ended September 30, 2021

	Class A, Class B, Class C Stock and Additional Paid-In Capital		Accumulated Other Comprehensive Income (Loss)	Retained Earnings	Total Stockholders' Equity
	Shares	Amount			
Balance as of June 30, 2021	13,353	\$ 60,436	\$ 190	\$ 176,939	\$ 237,565
Stock issued	33	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 stock	(92)	(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	13,294	\$ 61,193	\$ (408)	\$ 183,782	\$ 244,567

Nine Months Ended September 30, 2021

	Class A, Class B, Class C Stock and Additional Paid-In Capital		Accumulated Other Comprehensive Income (Loss)	Retained Earnings	Total Stockholders' Equity
	Shares	Amount			
Balance as of December 31, 2020	13,504	\$ 58,510	\$ 633	\$ 163,401	\$ 222,544
Stock issued	103	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 stock	(313)	(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	13,294	\$ 61,193	\$ (408)	\$ 183,782	\$ 244,567

Three Months Ended September 30, 2022

	Class A, Class B, Class C Stock and Additional Paid-In Capital		Accumulated Other Comprehensive Income (Loss)	Retained Earnings	Total Stockholders' Equity
	Shares	Amount			
Balance as of June 30, 2022	13,078	\$ 64,402	\$ (5,828)	\$ 196,845	\$ 255,419
Stock issued	31	0	0	0	0
Stock-based compensation expense	0	5,018	0	0	5,018
Tax withholding related to vesting of restricted stock units and other	0	(2,315)	0	0	(2,315)
Repurchases of stock	(138)	(857)	0	(14,535)	(15,392)
Sale of interest in consolidated entities	0	10	0	0	10
Net income	0	0	0	13,910	13,910
Other comprehensive income (loss)	0	0	(3,024)	0	(3,024)
Balance as of September 30, 2022	12,971	\$ 66,258	\$ (8,852)	\$ 196,220	\$ 253,626

Nine Months Ended September 30, 2022

	Class A, Class B, Class C Stock and Additional Paid-In Capital		Accumulated Other Comprehensive Income (Loss)	Retained Earnings	Total Stockholders' Equity
	Shares	Amount			
Balance as of December 31, 2021	13,242	\$ 61,774	\$ (1,623)	\$ 191,484	\$ 251,635
Stock issued	98	8	0	0	8
Stock-based compensation expense	0	14,388	0	0	14,388
Tax withholding related to vesting of restricted stock units and other	0	(7,644)	0	(1)	(7,645)
Repurchases of stock	(369)	(2,278)	0	(41,611)	(43,889)
Sale of interest in consolidated entities	0	10	0	0	10
Net income	0	0	0	46,348	46,348
Other comprehensive income (loss)	0	0	(7,229)	0	(7,229)
Balance as of September 30, 2022	12,971	\$ 66,258	\$ (8,852)	\$ 196,220	\$ 253,626

See accompanying notes.

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

	Nine Months Ended September 30,	
	2021	2022
Operating activities		
Net income	\$ 55,391	\$ 46,348
Adjustments:		
Depreciation and impairment of property and equipment	8,340	11,222
Amortization and impairment of intangible assets	662	505
Stock-based compensation expense	11,422	14,262
Deferred income taxes	192	(6,157)
(Gain) loss on debt and equity securities, net	(9,792)	3,856
Other	(199)	369
Changes in assets and liabilities, net of effects of acquisitions:		
Accounts receivable	(3,276)	2,298
Income taxes, net	2,744	(862)
Other assets	(1,447)	(4,268)
Accounts payable	(874)	735
Accrued expenses and other liabilities	2,763	491
Accrued revenue share	386	(1,022)
Deferred revenue	406	104
Net cash provided by operating activities	66,718	67,881
Investing activities		
Purchases of property and equipment	(18,257)	(23,890)
Purchases of marketable securities	(95,106)	(67,253)
Maturities and sales of marketable securities	92,126	84,087
Purchases of non-marketable securities	(2,068)	(1,628)
Maturities and sales of non-marketable securities	590	131
Acquisitions, net of cash acquired, and purchases of intangible assets	(2,233)	(6,885)
Other investing activities	441	1,367
Net cash used in investing activities	(24,507)	(14,071)
Financing activities		
Net payments related to stock-based award activities	(7,239)	(7,221)
Repurchases of stock	(36,801)	(43,889)
Proceeds from issuance of debt, net of costs	13,949	44,322
Repayments of debt	(15,070)	(45,350)
Proceeds from sale of interest in consolidated entities, net	310	10
Net cash used in financing activities	(44,851)	(52,128)
Effect of exchange rate changes on cash and cash equivalents	(106)	(643)
Net increase (decrease) in cash and cash equivalents	(2,746)	1,039
Cash and cash equivalents at beginning of period	26,465	20,945
Cash and cash equivalents at end of period	<u>\$ 23,719</u>	<u>\$ 21,984</u>

See accompanying notes.

Alphabet Inc.
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS
(Unaudited)

Note 1. 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 Inc. ("Alphabet") became the successor issuer to Google.

We generate revenues by delivering relevant, cost-effective online advertising; cloud-based solutions that provide customers with infrastructure and platform services and collaboration tools; sales of other products and services, such as apps and in-app purchases, digital content products, and hardware; and fees received for subscription-based products such as YouTube Premium and YouTube TV.

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

These unaudited interim consolidated financial statements have been prepared in accordance with generally accepted accounting principles in the United States (GAAP), and in our opinion, include all adjustments of a normal recurring nature necessary for fair financial statement presentation. Interim results are not necessarily indicative of the results to be expected for the full year ending December 31, 2022. We have made 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.

These consolidated financial statements and other information presented in this Form 10-Q 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, 2021 filed with the SEC.

Stock Split Effected in the Form of a Stock Dividend ("Stock Split")

On February 1, 2022, the company announced that the Board of Directors had approved and declared a 20-for-one stock split in the form of a one-time special stock dividend on each share of the company's Class A, Class B, and Class C stock. The Stock Split had a record date of July 1, 2022 and an effective date of July 15, 2022. The par value per share of our Class A, Class B, and Class C stock remains unchanged at \$0.001 per share after the Stock Split. All prior period references made to share or per share amounts in the accompanying consolidated financial statements and applicable disclosures have been retroactively adjusted to reflect the effects of the Stock Split.

Note 2. Revenues

Disaggregated Revenues

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

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2021	2022	2021	2022
Google Search & other	\$ 37,926	\$ 39,539	\$ 105,650	\$ 119,846
YouTube ads	7,205	7,071	20,212	21,280
Google Network	7,999	7,872	22,396	24,305
Google advertising	53,130	54,482	148,258	165,431
Google other	6,754	6,895	19,871	20,259
Google Services total	59,884	61,377	168,129	185,690
Google Cloud	4,990	6,868	13,665	18,965
Other Bets	182	209	572	842
Hedging gains (losses)	62	638	(54)	1,291
Total revenues	\$ 65,118	\$ 69,092	\$ 182,312	\$ 206,788

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

	Three Months Ended September 30,				Nine Months Ended September 30,			
	2021		2022		2021		2022	
United States	\$ 29,824	46 %	\$ 33,372	48 %	\$ 83,064	46 %	\$ 97,832	47 %
EMEA ⁽¹⁾	19,839	30	19,450	28	55,954	31	60,300	29
APAC ⁽¹⁾	11,705	18	11,494	17	33,391	18	35,045	17
Other Americas ⁽¹⁾	3,688	6	4,138	6	9,957	5	12,320	6
Hedging gains (losses)	62	0	638	1	(54)	0	1,291	1
Total revenues	\$ 65,118	100 %	\$ 69,092	100 %	\$ 182,312	100 %	\$ 206,788	100 %

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

Revenue Backlog and Deferred Revenues

As of September 30, 2022, we had \$52.4 billion of remaining performance obligations ("revenue backlog"), primarily related to Google Cloud, and expect to recognize approximately half of this amount as revenues over the next 24 months with the remaining to be recognized thereafter. Our revenue backlog represents commitments in customer contracts for future services that have not yet been recognized as revenues. The amount and timing of revenue recognition for these commitments is largely driven by when our customers utilize services and our ability to deliver in accordance with relevant contract terms, which could affect our estimate of revenue backlog and when we expect to recognize such as revenues. Revenue backlog includes related deferred revenue currently recorded as well as amounts that will be invoiced in future periods and excludes contracts with an original expected term of one year or less and cancellable contracts.

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. Total deferred revenue as of December 31, 2021 was \$3.8 billion, of which \$2.4 billion was recognized as revenues during the nine months ended September 30, 2022.

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 losses related to debt securities still held where we have elected the fair value option were \$35 million and \$779 million as of December 31, 2021 and September 30, 2022, respectively. As of December 31, 2021 and September 30, 2022, the fair value of these debt securities was \$4.7 billion and \$6.6 billion, respectively.

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

	As of December 31, 2021					
	Adjusted Cost	Gross Unrealized Gains	Gross Unrealized Losses	Fair Value	Cash and Cash Equivalents	Marketable Securities
Level 2:						
Time deposits ⁽¹⁾	\$ 5,133	\$ 0	\$ 0	\$ 5,133	\$ 5,133	\$ 0
Government bonds	53,288	258	(238)	53,308	5	53,303
Corporate debt securities	35,605	194	(223)	35,576	12	35,564
Mortgage-backed and asset-backed securities	18,829	96	(112)	18,813	0	18,813
Total	<u>\$ 112,855</u>	<u>\$ 548</u>	<u>\$ (573)</u>	<u>\$ 112,830</u>	<u>\$ 5,150</u>	<u>\$ 107,680</u>

	As of September 30, 2022					
	Adjusted Cost	Gross Unrealized Gains	Gross Unrealized Losses	Fair Value	Cash and Cash Equivalents	Marketable Securities
Level 2:						
Time deposits ⁽¹⁾	\$ 4,925	\$ 0	\$ 0	\$ 4,925	\$ 4,920	\$ 5
Government bonds	42,863	0	(2,523)	40,340	93	40,247
Corporate debt securities	29,397	0	(1,833)	27,564	179	27,385
Mortgage-backed and asset-backed securities	16,599	0	(1,376)	15,223	0	15,223
Total	<u>\$ 93,784</u>	<u>\$ 0</u>	<u>\$ (5,732)</u>	<u>\$ 88,052</u>	<u>\$ 5,192</u>	<u>\$ 82,860</u>

⁽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 \$109 million and \$14 million for the three months ended September 30, 2021 and 2022, respectively, and \$360 million and \$83 million for the nine months ended September 30, 2021 and 2022, respectively. We recognized gross realized losses of \$29 million and \$551 million for the three months ended September 30, 2021 and 2022, respectively, and \$180 million and \$1.2 billion for the nine months ended September 30, 2021 and 2022, respectively. We reflect these gains and losses as a component of other income (expense), net.

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

	As of September 30, 2022
Due in 1 year or less	\$ 7,998
Due in 1 year through 5 years	58,061
Due in 5 years through 10 years	11,848
Due after 10 years	11,353
Total	<u>\$ 89,260</u>

The following tables present fair values and gross unrealized losses recorded to accumulated other comprehensive income (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, 2021					
	Less than 12 Months		12 Months or Greater		Total	
	Fair Value	Unrealized Loss	Fair Value	Unrealized Loss	Fair Value	Unrealized Loss
Government bonds	\$ 32,843	\$ (236)	\$ 71	\$ (2)	\$ 32,914	\$ (238)
Corporate debt securities	22,737	(152)	303	(5)	23,040	(157)
Mortgage-backed and asset-backed securities	11,502	(106)	248	(6)	11,750	(112)
Total	<u>\$ 67,082</u>	<u>\$ (494)</u>	<u>\$ 622</u>	<u>\$ (13)</u>	<u>\$ 67,704</u>	<u>\$ (507)</u>

	As of September 30, 2022					
	Less than 12 Months		12 Months or Greater		Total	
	Fair Value	Unrealized Loss	Fair Value	Unrealized Loss	Fair Value	Unrealized Loss
Government bonds	\$ 31,685	\$ (1,864)	\$ 8,064	\$ (659)	\$ 39,749	\$ (2,523)
Corporate debt securities	19,378	(1,042)	7,431	(697)	26,809	(1,739)
Mortgage-backed and asset-backed securities	11,316	(992)	3,886	(384)	15,202	(1,376)
Total	<u>\$ 62,379</u>	<u>\$ (3,898)</u>	<u>\$ 19,381</u>	<u>\$ (1,740)</u>	<u>\$ 81,760</u>	<u>\$ (5,638)</u>

During the three and nine months ended September 30, 2021 and 2022, we did not recognize significant credit losses, and the ending allowance balances for credit losses were immaterial as of December 31, 2021 and September 30, 2022. See Note 6 for further details on other income (expense), net.

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

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2021	2022	2021	2022
Net gain (loss) on equity securities sold during the period	\$ (36)	\$ (73)	\$ 545	\$ (355)
Net unrealized gain (loss) on equity securities held as of the end of the period	2,157	(574)	9,185	(1,613)
Total gain (loss) recognized in other income (expense), net	<u>\$ 2,121</u>	<u>\$ (647)</u>	<u>\$ 9,730</u>	<u>\$ (1,968)</u>

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 (losses) may have been reflected in periods prior to the period of sale, we believe they are important supplemental information as they reflect the economic net gains (losses) on the securities sold during the period. Cumulative net gains (losses) 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,	
	2021	2022	2021	2022
Total sale price	\$ 1,199	\$ 296	\$ 4,553	\$ 1,6
Total initial cost	188	310	955	7
Cumulative net gain (loss) ⁽¹⁾	\$ 1,011	\$ (14)	\$ 3,598	\$ 8

- ⁽¹⁾ Cumulative net gains for the nine months ended September 30, 2021 excludes cumulative losses of \$684 million resulting from our equity derivatives, which hedged the changes in fair value of certain marketable equity securities sold. 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 marketable and non-marketable equity securities are summarized below (in millions):

	As of December 31, 2021		
	Marketable Securities	Non-Marketable Securities	Total
Total initial cost	\$ 4,211	\$ 15,135	\$ 19,346
Cumulative net gain (loss) ⁽¹⁾	3,587	12,436	16,023
Carrying value ⁽²⁾	\$ 7,798	\$ 27,571	\$ 35,369

- ⁽¹⁾ Non-marketable equity securities cumulative net gain (loss) is comprised of \$14.1 billion gains and \$1.7 billion losses (including impairments).
- ⁽²⁾ The long-term portion of marketable equity securities (subject to long-term lock-up restrictions) of \$1.4 billion is included within other non-current assets.

	As of September 30, 2022		
	Marketable Securities	Non-Marketable Securities	Total
Total initial cost	\$ 5,752	\$ 15,540	\$ 21,292
Cumulative net gain (loss) ⁽¹⁾	104	13,104	13,208
Carrying value ⁽²⁾	\$ 5,856	\$ 28,644	\$ 34,500

- ⁽¹⁾ Non-marketable equity securities cumulative net gain (loss) is comprised of \$16.9 billion gains and \$3.8 billion losses (including impairments).
- ⁽²⁾ The long-term portion of marketable equity securities (subject to long-term lock-up restrictions) of \$841 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, 2021		As of September 30, 2022	
	Cash and Cash Equivalents	Marketable Securities	Cash and Cash Equivalents	Marketable Securities
Level 1:				
Money market funds	\$ 7,499	\$ 0	\$ 8,318	\$ 0
Marketable equity securities ⁽¹⁾⁽²⁾	0	7,447	0	5,509
	7,499	7,447	8,318	5,509
Level 2:				
Mutual funds	0	351	0	347
Total	\$ 7,499	\$ 7,798	\$ 8,318	\$ 5,856

⁽¹⁾ The balance as of December 31, 2021 and September 30, 2022 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 investments are subject to short-term lock-up restrictions).

⁽²⁾ As of December 31, 2021 and September 30, 2022 the long-term portion of marketable equity securities (subject to long-term lock-up restrictions) of \$1.4 billion and \$841 million, respectively, is included within other non-current assets.

Non-marketable equity securities

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

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2021	2022	2021	2022
Unrealized gains on non-marketable equity securities	\$ 1,260	\$ 219	\$ 6,245	\$ 3,2
Unrealized losses on non-marketable equity securities (including impairments)	(37)	(707)	(98)	(2,3
Total unrealized gain (loss) recognized on non-marketable equity securities	\$ 1,223	\$ (488)	\$ 6,147	\$ 8

During the three months ended September 30, 2022, included in the \$28.6 billion of non-marketable equity securities held as of the end of the period, \$1.7 billion were measured at fair value resulting in a net unrealized loss of \$488 million.

Equity securities accounted for under the Equity Method

As of December 31, 2021 and September 30, 2022, equity securities accounted for under the equity method had a carrying value of approximately \$1.5 billion and \$1.3 billion, respectively. Our share of gains and losses, including impairments, 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, 2022, the net accumulated gain on our foreign currency cash flow hedges before tax effect was \$1.9 billion, 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 outstanding derivative instruments were as follows (in millions):

	As of December 31, 2021	As of September 30, 2022
Derivatives Designated as Hedging Instruments:		
Foreign exchange contracts		
Cash flow hedges	\$ 16,362	\$ 17,513
Fair value hedges	\$ 2,556	\$ 2,435
Net investment hedges	\$ 10,159	\$ 8,993
Derivatives Not Designated as Hedging Instruments:		
Foreign exchange contracts	\$ 41,031	\$ 36,988
Other contracts	\$ 4,275	\$ 6,728

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

		As of December 31, 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:				
<u>Level 2:</u>				
Foreign exchange contracts	Other current and non-current assets	\$ 867	\$ 42	\$ 909
Other contracts	Other current and non-current assets	0	52	52
Total		\$ 867	\$ 94	\$ 961
Derivative Liabilities:				
<u>Level 2:</u>				
Foreign exchange contracts	Accrued expenses and other liabilities, current and non-current	\$ 8	\$ 452	\$ 460
Other contracts	Accrued expenses and other liabilities, current and non-current	0	121	121
Total		\$ 8	\$ 573	\$ 581
		As of September 30, 2022		
	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:				
<u>Level 2:</u>				
Foreign exchange contracts	Other current and non-current assets	\$ 2,317	\$ 226	\$ 2,543
Other contracts	Other current and non-current assets	0	46	46
Total		\$ 2,317	\$ 272	\$ 2,589
Derivative Liabilities:				
<u>Level 2:</u>				
Foreign exchange contracts	Accrued expenses and other liabilities, current and non-current	\$ 13	\$ 820	\$ 833
Other contracts	Accrued expenses and other liabilities, current and non-current	0	45	45
Total		\$ 13	\$ 865	\$ 878

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		Nine Months Ended	
	September 30,		September 30,	
	2021	2022	2021	2022
Derivatives in Cash Flow Hedging Relationship:				
Foreign exchange contracts				
Amount included in the assessment of effectiveness	\$ 336	\$ 1,486	\$ 438	\$ 2,752
Amount excluded from the assessment of effectiveness	18	(77)	63	(131)
Derivatives in Net Investment Hedging Relationship:				
Foreign exchange contracts				
Amount included in the assessment of effectiveness	212	760	411	1,418
Total	\$ 566	\$ 2,169	\$ 912	\$ 4,039

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

	Gains (Losses) Recognized in Income			
	Three Months Ended			
	September 30,			
	2021		2022	
	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	\$ 65,118	\$ 2,033	\$ 69,092	\$ (902)

Gains (Losses) on Derivatives in Cash Flow Hedging Relationship:

Foreign exchange contracts				
Amount of gains (losses) reclassified from AOCI to income	\$ 65	\$ 0	\$ 658	\$ 0
Amount excluded from the assessment of effectiveness recognized in earnings based on an amortization approach	(3)	0	(20)	0

Gains (Losses) on Derivatives in Fair Value Hedging Relationship:

Foreign exchange contracts				
Hedged items	0	(69)	0	(226)
Derivatives designated as hedging instruments	0	69	0	226
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	19	0	59

Gains (Losses) on Derivatives Not Designated as Hedging Instruments:

Foreign exchange contracts	0	(148)	0	(495)
Other Contracts	0	(88)	0	34
Total gains (losses)	\$ 62	\$ (215)	\$ 638	\$ (396)

	Gains (Losses) Recognized in Income			
	Nine Months Ended			
	September 30,			
	2021		2022	
	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	\$ 182,312	\$ 9,503	\$ 206,788	\$ (2,501)
Gains (Losses) on Derivatives in Cash Flow Hedging Relationship:				
Foreign exchange contracts				
Amount of gains (losses) reclassified from AOCI to income	\$ (43)	\$ 0	\$ 1,355	\$ 0
Amount excluded from the assessment of effectiveness recognized in earnings based on an amortization approach	(11)	0	(63)	0
Gains (Losses) on Derivatives in Fair Value Hedging Relationship:				
Foreign exchange contracts				
Hedged items	0	(41)	0	(349)
Derivatives designated as hedging instruments	0	41	0	350
Amount excluded from the assessment of effectiveness	0	6	0	9
Gains (Losses) on Derivatives in Net Investment Hedging Relationship:				
Foreign exchange contracts				
Amount excluded from the assessment of effectiveness	0	60	0	99
Gains (Losses) on Derivatives Not Designated as Hedging Instruments:				
Foreign exchange contracts	0	(552)	0	(891)
Other Contracts	0	93	0	158
Total gains (losses)	<u>\$ (54)</u>	<u>\$ (393)</u>	<u>\$ 1,292</u>	<u>\$ (624)</u>

Offsetting of Derivatives

The gross amounts of 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, 2021							
	Gross Amounts of Recognized Assets	Gross Amounts Offset in the Consolidated Balance Sheets	Net Presented in the Consolidated Balance Sheets	Gross Amounts Not Offset in the Consolidated Balance Sheets, but Have Legal Rights to Offset			
				Financial Instruments	Cash Collateral Received	Non-Cash Collateral Received	Net Assets Exposed
Derivatives	\$ 999	\$ (38)	\$ 961	\$ (434) ⁽¹⁾	\$ (394)	\$ (12)	\$ 121

As of September 30, 2022							
	Gross Amounts of Recognized Assets	Gross Amounts Offset in the Consolidated Balance Sheets	Net Presented in the Consolidated Balance Sheets	Gross Amounts Not Offset in the Consolidated Balance Sheets, but Have Legal Rights to Offset			
				Financial Instruments	Cash Collateral Received	Non-Cash Collateral Received	Net Assets Exposed
Derivatives	\$ 2,639	\$ (50)	\$ 2,589	\$ (755) ⁽¹⁾	\$ (1,609)	\$ (32)	\$ 193

⁽¹⁾ The balances as of December 31, 2021 and September 30, 2022 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, 2021							
	Gross Amounts of Recognized Liabilities	Gross Amounts Offset in the Consolidated Balance Sheets	Net Presented in the Consolidated Balance Sheets	Gross Amounts Not Offset in the Consolidated Balance Sheets, but Have Legal Rights to Offset			
				Financial Instruments	Cash Collateral Pledged	Non-Cash Collateral Pledged	Net Liabilities
Derivatives	\$ 619	\$ (38)	\$ 581	\$ (434) ⁽²⁾	\$ (4)	\$ (110)	\$ 33

As of September 30, 2022							
	Gross Amounts of Recognized Liabilities	Gross Amounts Offset in the Consolidated Balance Sheets	Net Presented in the Consolidated Balance Sheets	Gross Amounts Not Offset in the Consolidated Balance Sheets, but Have Legal Rights to Offset			
				Financial Instruments	Cash Collateral Pledged	Non-Cash Collateral Pledged	Net Liabilities
Derivatives	\$ 928	\$ (50)	\$ 878	\$ (755) ⁽²⁾	\$ (15)	\$ (2)	\$ 106

⁽²⁾ The balances as of December 31, 2021 and September 30, 2022 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 (VIE)

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, 2021 and September 30, 2022, assets that can only be used to settle obligations of these VIEs were \$6.0 billion and \$4.8 billion, respectively, and the liabilities for which creditors only have recourse to the VIEs were \$2.5 billion and \$2.7 billion, respectively.

As of December 31, 2021 and September 30, 2022, total noncontrolling interests (NCI), including redeemable noncontrolling interests (RNCI), in our consolidated subsidiaries were \$4.3 billion and \$3.9 billion, 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.

Unconsolidated VIEs

We have investments in 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 securities or equity method investments.

The maximum exposure of these unconsolidated VIEs is 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 \$2.7 billion and \$2.9 billion, respectively, as of December 31, 2021 and \$2.6 billion and \$2.6 billion, respectively, as of September 30, 2022.

Note 5. Debt

Short-Term Debt

We have a debt financing program of up to \$10.0 billion through the issuance of commercial paper. Net proceeds from this program are used for general corporate purposes. We had no commercial paper outstanding as of December 31, 2021 and September 30, 2022.

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

Long-Term Debt

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

	Maturity	Coupon Rate	Effective Interest Rate	As of December 31, 2021	As of September 30, 2022
Debt					
2014-2020 Notes Issuances	2024 - 2060	0.45% - 3.38%	0.57% - 3.38%	\$ 13,000	\$ 13,000
Future finance lease payments, net and other ⁽¹⁾				2,086	2,213
Total debt				15,086	15,213
Unamortized discount and debt issuance costs				(156)	(146)
Less: Current portion future finance lease payments, net and other current debt ⁽¹⁾⁽²⁾				(113)	(414)
Total long-term debt				<u>\$ 14,817</u>	<u>\$ 14,653</u>

⁽¹⁾ Future finance lease payments are net of imputed interest.

⁽²⁾ Total current portion of long-term debt is included within other accrued expenses and current liabilities. See Note 6 for further details.

The notes in the table above are 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 was approximately \$12.4 billion and \$9.7 billion as of December 31, 2021 and September 30, 2022, 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, 2022, we had \$10.0 billion of revolving credit facilities, \$4.0 billion expiring in April 2023 and \$6.0 billion expiring in April 2026. The interest rates for all 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 were outstanding under the credit facilities as of December 31, 2021 and September 30, 2022.

Note 6. Supplemental Financial Statement Information

Accounts Receivable

The allowance for credit losses on accounts receivable was \$550 million and \$731 million as of December 31, 2021 and September 30, 2022, respectively.

Property and Equipment, Net

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

	As of December 31, 2021	As of September 30, 2022
Land and buildings	\$ 58,881	\$ 64,679
Information technology assets	55,606	61,938
Construction in progress	23,172	26,899
Leasehold improvements	9,146	10,062
Furniture and fixtures	208	297
Property and equipment, gross	147,013	163,875
Less: accumulated depreciation	(49,414)	(55,512)
Property and equipment, net	\$ 97,599	\$ 108,363

Accrued expenses and other current liabilities

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

	As of December 31, 2021	As of September 30, 2022
European Commission fines ⁽¹⁾	\$ 9,799	\$ 8,264
Accrued customer liabilities	3,505	2,943
Accrued purchases of property and equipment	2,415	3,255
Current operating lease liabilities	2,189	2,285
Other accrued expenses and current liabilities	13,328	18,291
Accrued expenses and other current liabilities	\$ 31,236	\$ 35,038

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

Accumulated Other Comprehensive Income (Loss)

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, 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)

	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, 2021	\$ (2,306)	\$ 236	\$ 447	\$ (1,623)
Other comprehensive income (loss) before reclassifications	(3,801)	(5,204)	2,296	(6,709)
Amounts excluded from the assessment of hedge effectiveness recorded in AOCI	0	0	(131)	(131)
Amounts reclassified from AOCI	0	743	(1,132)	(389)
Other comprehensive income (loss)	(3,801)	(4,461)	1,033	(7,229)
Balance as of September 30, 2022	\$ (6,107)	\$ (4,225)	\$ 1,480	\$ (8,852)

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	2021	2022	2021	2022
Unrealized gains (losses) on available-for-sale investments					
	Other income (expense), net	\$ 73	\$ (464)	\$ 155	\$ (953)
	Benefit (provision) for income taxes	(16)	102	(34)	210
	Net of income tax	57	(362)	121	(743)
Unrealized gains (losses) on cash flow hedges					
Foreign exchange contracts	Revenue	65	658	(43)	1,355
Interest rate contracts	Other income (expense), net	1	2	4	5
	Benefit (provision) for income taxes	(6)	(113)	18	(228)
	Net of income tax	60	547	(21)	1,132
Total amount reclassified, net of income tax		\$ 117	\$ 185	\$ 100	\$ 389

Other Income (Expense), Net

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

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2021	2022	2021	2022
Interest income	\$ 387	\$ 615	\$ 1,121	\$ 1,515
Interest expense ⁽¹⁾	(77)	(101)	(229)	(267)
Foreign currency exchange gain (loss), net	(139)	(136)	(77)	(469)
Gain (loss) on debt securities, net	37	(731)	62	(1,888)
Gain (loss) on equity securities, net	2,121	(647)	9,730	(1,968)
Performance fees	(492)	54	(1,680)	605
Income (loss) and impairment from equity method investments, net	188	(99)	285	(306)
Other	8	143	291	277
Other income (expense), net	<u>\$ 2,033</u>	<u>\$ (902)</u>	<u>\$ 9,503</u>	<u>\$ (2,501)</u>

⁽¹⁾ Interest expense is net of interest capitalized of \$40 million and \$28 million for the three months ended September 30, 2021 and 2022, respectively, and \$132 million and \$99 million for the nine months ended September 30, 2021 and 2022, respectively.

Note 7. Acquisitions

Mandiant Acquisition

On September 12, 2022 we closed the acquisition of Mandiant for a total purchase price of \$6.1 billion, including cash and debt. The purchase price excludes post acquisition compensation arrangements. Mandiant's dynamic cyber defense, threat intelligence and incident response services are expected to enhance Google Cloud's security offerings. The financial results of Mandiant have been included within the Google Cloud segment as of the close of the acquisition.

The purchase price was allocated as follows (in millions):

Intangible assets	\$ 840
Goodwill ⁽¹⁾	4,772
Net assets acquired ⁽²⁾	489
Total purchase price	<u>\$ 6,101</u>

⁽¹⁾ Goodwill was recorded in the Google Cloud segment and primarily attributable to synergies expected to arise after the acquisition. Goodwill is not deductible for tax purposes.

⁽²⁾ Includes \$706 million of acquired cash.

Intangible assets acquired as of the acquisition date were as follows:

	Amount (in millions)	Weighted-Average Useful Life (in years)
Patents and developed technology	\$ 349	4.8
Customer relationships	366	8.0
Trade names and other	125	5.9
Total intangible assets	<u>\$ 840</u>	

Note 8. Goodwill and Other Intangible Assets

Goodwill

Changes in the carrying amount of goodwill for the nine months ended September 30, 2022 were as follows (in millions):

	Google Services	Google Cloud	Other Bets	Total
Balance as of December 31, 2021	\$ 19,826	\$ 2,337	\$ 793	\$ 22,956
Acquisitions	1,146	4,875	113	6,134
Foreign currency translation and other adjustments	(227)	(23)	(6)	(256)
Balance as of September 30, 2022	<u>\$ 20,745</u>	<u>\$ 7,189</u>	<u>\$ 900</u>	<u>\$ 28,834</u>

Other Intangible Assets

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

	As of December 31, 2021		
	Gross Carrying Amount	Accumulated Amortization	Net Carrying Amount
Patents and developed technology	\$ 4,786	\$ 4,112	\$ 674
Customer relationships	506	140	366
Trade names and other	534	295	239
Total definite-lived intangible assets	5,826	4,547	1,279
Indefinite-lived intangible assets	138	0	138
Total intangible assets	<u>\$ 5,964</u>	<u>\$ 4,547</u>	<u>\$ 1,417</u>

	As of September 30, 2022		
	Gross Carrying Amount	Accumulated Amortization	Net Carrying Amount
Patents and developed technology	\$ 1,364	\$ 491	\$ 873
Customer relationships	891	224	667
Trade names and other	528	110	418
Total definite-lived intangible assets	2,783	825	1,958
Indefinite-lived intangible assets	234	0	234
Total intangible assets	<u>\$ 3,017</u>	<u>\$ 825</u>	<u>\$ 2,192</u>

For the nine months ended September 30, 2022, \$4.2 billion of intangible assets that were fully amortized have been removed from gross intangible assets and accumulated amortization.

Amortization expense relating to purchased intangible assets was \$219 million and \$113 million for the three months ended September 30, 2021 and 2022, respectively, and \$651 million and \$505 million for the nine months ended September 30, 2021 and 2022, respectively.

Expected amortization expense related to purchased intangible assets held as of September 30, 2022 was as follows (in millions):

Remainder of 2022	\$ 134
2023	458
2024	439
2025	309
2026	232
Thereafter	386
Total	<u>\$ 1,958</u>

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, 2022, 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 to the General Court, 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 November 10, 2021, the General Court rejected our appeal, and we subsequently filed an appeal with the European Court of Justice on January 20, 2022.

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, and on October 29, 2018, we implemented changes to certain of our Android distribution practices. On September 14, 2022, the General Court rejected our appeal on three claims, accepted our appeal on one claim, and reduced the fine to €4.1 billion. We are preparing to appeal to the European Court of Justice. In the second quarter of 2018, we recognized a charge of \$5.1 billion for the fine, which we reduced by \$217 million in the third quarter of 2022.

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, which remains pending. 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 various competition matters by regulatory authorities in the United States (U.S.), Europe, and other jurisdictions globally. For example:

- 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. Further, in June 2022, the Australian Competition and Consumer Commission (ACCC) and the United Kingdom's Competition and Markets Authority (CMA) each opened an investigation into Search distribution practices.
- On December 16, 2020, a number of state Attorneys General filed an antitrust complaint in the U.S. 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. The DOJ's investigation of similar issues remains ongoing. The EC, the CMA, and the ACCC each opened a formal investigation into Google's advertising technology business practices on June 22, 2021, May 25, 2022, and June 29, 2022, respectively.

- On July 7, 2021, a number of state Attorneys General filed an antitrust complaint in the U.S. 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. In May 2022, the EC and the CMA each opened a formal investigation into Google Play's business practices. Korean regulators are investigating Google Play's billing practices, most recently opening a formal review in May 2022 of Google's compliance with the new app store billing regulations.

We believe these complaints are without merit and will defend ourselves vigorously. We continue to cooperate with federal and state regulators in the U.S., 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.

Other

We are also regularly subject to claims, suits, regulatory and government investigations, other proceedings, and consent decrees involving competition, intellectual property, privacy and cybersecurity, 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. For example, we currently have a number of privacy investigations and suits ongoing in multiple jurisdictions. 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.

We have ongoing legal matters relating to Russia. For example, civil judgments that include compounding penalties have been imposed upon us in connection with disputes regarding the termination of accounts, including those of sanctioned parties. We do not believe these ongoing legal matters will have a material adverse effect on our business, consolidated financial position, results of operations, or cash flows.

Certain 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 the 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**Stock Split**

On July 15, 2022, the company executed a 20-for-one stock split with a record date of July 1, 2022, effected in the form of a one-time special stock dividend on each share of the company's Class A, Class B, and Class C stock. All prior period references made to share or per share amounts in the accompanying consolidated financial statements and applicable disclosures have been retroactively adjusted to reflect the effects of the Stock Split. See Note 1 for further details.

Share Repurchases

In April 2022, the Board of Directors of Alphabet authorized the company to repurchase up to \$70.0 billion of its Class A and Class C shares. As of September 30, 2022, \$43.5 billion remains available for Class A and Class C share repurchases. Class A and Class C shares are repurchased 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, 2022, we repurchased and subsequently retired 138 million and 369 million aggregate shares for \$15.4 billion and \$43.9 billion, respectively. Of the aggregate amount repurchased and subsequently retired during the three months ended September 30, 2022, 25 million shares were Class A stock for \$2.7 billion and 113 million shares were Class C stock for \$12.7 billion. Of the aggregate amount repurchased and subsequently retired during the nine months ended September 30, 2022, 46 million shares were Class A stock for \$5.2 billion and 323 million shares were Class C stock for \$38.7 billion.

Repurchases are 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.

Note 11. Net Income Per Share

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

	Three Months Ended September 30,					
	2021			2022		
	Class A	Class B	Class C	Class A	Class B	Class C
Basic net income per share:						
Numerator						
Allocation of undistributed earnings	\$ 8,548	\$ 1,291	\$ 9,097	\$ 6,393	\$ 946	\$ 6,571
Denominator						
Number of shares used in per share computation	6,010	908	6,397	5,983	885	6,150
Basic net income per share	\$ 1.42	\$ 1.42	\$ 1.42	\$ 1.07	\$ 1.07	\$ 1.07
Diluted net income per share:						
Numerator						
Allocation of undistributed earnings for basic computation	\$ 8,548	\$ 1,291	\$ 9,097	\$ 6,393	\$ 946	\$ 6,571
Reallocation of undistributed earnings as a result of conversion of Class B to Class A shares	1,291	0	0	946	0	0
Reallocation of undistributed earnings	(156)	(20)	156	(45)	(6)	45
Allocation of undistributed earnings	\$ 9,683	\$ 1,271	\$ 9,253	\$ 7,294	\$ 940	\$ 6,616
Denominator						
Number of shares used in basic computation	6,010	908	6,397	5,983	885	6,150
Weighted-average effect of dilutive securities						
Add:						
Conversion of Class B to Class A shares outstanding	908	0	0	885	0	0
Restricted stock units and other contingently issuable shares	0	0	215	0	0	79
Number of shares used in per share computation	6,918	908	6,612	6,868	885	6,229
Diluted net income per share	\$ 1.40	\$ 1.40	\$ 1.40	\$ 1.06	\$ 1.06	\$ 1.06

	Nine Months Ended September 30,					
	2021			2022		
	Class A	Class B	Class C	Class A	Class B	Class C
Basic net income per share:						
Numerator						
Allocation of undistributed earnings	\$ 24,867	\$ 3,776	\$ 26,748	\$ 21,213	\$ 3,137	\$ 21,998
Denominator						
Number of shares used in per share computation	6,010	912	6,464	6,004	888	6,226
Basic net income per share	\$ 4.14	\$ 4.14	\$ 4.14	\$ 3.53	\$ 3.53	\$ 3.53
Diluted net income per share:						
Numerator						
Allocation of undistributed earnings for basic computation	\$ 24,867	\$ 3,776	\$ 26,748	\$ 21,213	\$ 3,137	\$ 21,998
Reallocation of undistributed earnings as a result of conversion of Class B to Class A shares	3,776	0	0	3,137	0	0
Reallocation of undistributed earnings	(424)	(56)	424	(204)	(26)	204
Allocation of undistributed earnings	\$ 28,219	\$ 3,720	\$ 27,172	\$ 24,146	\$ 3,111	\$ 22,202
Denominator						
Number of shares used in basic computation	6,010	912	6,464	6,004	888	6,226
Weighted-average effect of dilutive securities						
Add:						
Conversion of Class B to Class A shares outstanding	912	0	0	888	0	0
Restricted stock units and other contingently issuable shares	0	0	202	0	0	111
Number of shares used in per share computation	6,922	912	6,666	6,892	888	6,337
Diluted net income per share	\$ 4.08	\$ 4.08	\$ 4.08	\$ 3.50	\$ 3.50	\$ 3.50

For the periods presented above, the net income per share amounts are the same for Class A, Class B, and Class C 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, 2021 and 2022, total stock-based compensation (SBC) expense was \$3.9 billion and \$5.0 billion, including amounts associated with awards we expect to settle in Alphabet stock of \$3.8 billion and \$4.8 billion, respectively. For the nine months ended September 30, 2021 and 2022, total SBC expense was \$11.7 billion and \$14.4 billion, including amounts associated with awards we expect to settle in Alphabet stock of \$11.2 billion and \$13.8 billion, respectively.

Stock-Based Award Activities

The following table summarizes the activities for unvested Alphabet restricted stock units (RSUs) for the nine months ended September 30, 2022 (in millions, except per share amounts):

	Unvested Restricted Stock Units	
	Number of Shares	Weighted-Average Grant-Date Fair Value
Unvested as of December 31, 2021	338	\$ 81.31
Granted	199	\$ 131.77
Vested	(152)	\$ 87.13
Forfeited/canceled	(25)	\$ 96.04
Unvested as of September 30, 2022	360	\$ 105.70

As of September 30, 2022, there was \$35.7 billion of unrecognized compensation cost related to unvested RSUs. This amount is expected to be recognized over a weighted-average period of 2.7 years.

Note 13. Income Taxes

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

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2021	2022	2021	2022
Income before provision for income taxes	\$ 23,064	\$ 16,233	\$ 66,332	\$ 54,181
Provision for income taxes	\$ 4,128	\$ 2,323	\$ 10,941	\$ 7,833
Effective tax rate	17.9 %	14.3 %	16.5 %	14.5 %

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. Total gross unrecognized tax benefits were \$5.2 billion and \$6.3 billion as of December 31, 2021 and September 30, 2022, respectively. Total unrecognized tax benefits that, if recognized, would affect our effective tax rate were \$3.7 billion and \$4.6 billion as of December 31, 2021 and September 30, 2022, respectively.

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

Note 14. Information about Segments and Geographic Areas

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 and 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 platform services, collaboration tools, and other services for enterprise customers. Google Cloud generates revenues from fees received for Google Cloud Platform services, Google Workspace collaboration tools, and other enterprise services.
- Other Bets is a combination of multiple operating segments that are not individually material. Revenues from Other Bets are generated primarily from the sale of health technology and internet services.

Revenues, certain costs, such as costs associated with content and traffic acquisition, certain engineering activities, and hardware, as well as certain 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 R&D activities. Additionally, hedging gains (losses) related to revenue are included in corporate costs.

Our operating segments are not evaluated using asset information.

The following table presents information about our segments (in millions):

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2021	2022	2021	2022
Revenues:				
Google Services	\$ 59,884	\$ 61,377	\$ 168,129	\$ 185,690
Google Cloud	4,990	6,868	13,665	18,965
Other Bets	182	209	572	842
Hedging gains (losses)	62	638	(54)	1,291
Total revenues	\$ 65,118	\$ 69,092	\$ 182,312	\$ 206,788

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2021	2022	2021	2022
Operating income (loss):				
Google Services	\$ 23,973	\$ 19,781	\$ 65,862	\$ 65,471
Google Cloud	(644)	(699)	(2,209)	(2,488)
Other Bets	(1,288)	(1,611)	(3,831)	(4,452)
Corporate costs, unallocated	(1,010)	(336)	(2,993)	(1,849)
Total income from operations	<u>\$ 21,031</u>	<u>\$ 17,135</u>	<u>\$ 56,829</u>	<u>\$ 56,682</u>

For revenues by geography, see Note 2.

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

	As of December 31, 2021	As of September 30, 2022
Long-lived assets:		
United States	\$ 80,207	\$ 91,632
International	30,351	30,408
Total long-lived assets	<u>\$ 110,558</u>	<u>\$ 122,040</u>

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 "Note About Forward-Looking Statements" and our consolidated financial statements and related notes included under Item 1 of this Quarterly Report on Form 10-Q as well as our Annual Report on Form 10-K for the fiscal year ended December 31, 2021, including Part I, Item 1A "Risk Factors."

Understanding Alphabet's Financial Results

Alphabet is a collection of businesses — the largest of which is Google. We report Google in two segments, Google Services and Google Cloud; we also report all non-Google businesses collectively as Other Bets. Other Bets include earlier stage technologies that are further afield from our core Google business. For further details on our segments, see Note 14 of the Notes to Consolidated Financial Statements included in Item 1 of this Quarterly Report on Form 10-Q.

Seasonality and other

Our advertising revenues are affected by seasonal fluctuations in internet usage, advertising expenditures, and underlying business trends, such as traditional retail seasonality. Additionally, our non-advertising revenues, including those generated from Google Cloud, Google Play, hardware, and YouTube, may be affected by fluctuations driven by changes in pricing, digital content releases, fee structures, new product and service launches, and other market dynamics, as well as seasonality.

Revenues and Monetization Metrics

Google Services

Google Services revenues consist of revenues generated from advertising ("Google advertising") as well as revenues from other sources ("Google other revenues").

Google Advertising

Google advertising revenues are comprised of the following:

- Google Search & other, which includes 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, which includes revenues generated on YouTube properties; and
- Google Network, which includes revenues generated on Google Network properties participating in AdMob, AdSense, and Google Ad Manager.

We use certain metrics to track how well traffic across various properties is monetized as it relates to our advertising revenues: paid clicks and cost-per-click pertain to traffic on Google Search & other properties, while impressions and cost-per-impressions pertain to traffic on our Network partners' properties.

Paid clicks represent engagement by users and include clicks on advertisements by end-users on Google search properties and other Google owned and operated properties including Gmail, Google Maps, and Google Play. 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.

Impressions include impressions displayed to users on Google Network properties participating primarily in AdMob, AdSense, and Google Ad Manager. 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 and the number of impressions, and for identifying the revenues generated by the corresponding click and impression activity.

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 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 and various external dynamics, including the effect of COVID-19, geopolitical events, regulations and other measures;
- seasonality; and
- traffic growth in emerging markets compared to more mature markets and across various advertising verticals and channels.

Google Other

Google other revenues are comprised of the following:

- Google Play, which includes sales of apps and in-app purchases and digital content sold in the Google Play store;
- Devices and Services, which includes sales of hardware, including Fitbit wearable devices, Google Nest home products, and Pixel phones;
- YouTube non-advertising, which includes YouTube Premium and YouTube TV subscriptions; and
- other products and services.

Google Cloud

Google Cloud revenues are comprised of the following:

- Google Cloud Platform, which includes fees for infrastructure, platform, and other services;
- Google Workspace, which includes fees for cloud-based collaboration tools for enterprises, such as Gmail, Docs, Drive, Calendar and Meet; and
- other enterprise services.

Other Bets

Revenues from Other Bets are generated primarily from the sale of health technology and internet services.

For further details on how we recognize revenue, see Note 1 of the Notes to Consolidated Financial Statements included in Part II, Item 8 in our Annual Report on Form 10-K for the fiscal year ended December 31, 2021.

Costs and Expenses

Our cost structure has two components: cost of revenues and operating expenses. Our operating expenses include costs related to R&D, sales and marketing, and general and administrative functions. Certain of these expenses, including those associated with the operation of our technical infrastructure as well as components of our operating expenses, are generally less variable in nature and may not correlate to the changes in revenue.

Cost of Revenues

Cost of revenues is comprised of TAC and other costs of revenues.

- TAC includes:
 - Amounts paid to our distribution partners who make available our search access points and services. Our distribution partners include browser providers, mobile carriers, original equipment manufacturers, and software developers.
 - Amounts paid to Google Network partners primarily for ads displayed on their properties.
- Other cost of revenues includes:
 - Content acquisition costs, which are payments to content providers from whom we license video and other content for distribution on YouTube 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, depreciation, energy, and other equipment costs) as well as other operations costs (such as content review as well as customer and product support costs).
- Inventory and other costs related to the hardware we sell ("hardware costs").

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 Search & other properties, because most of the advertiser revenues from ads served on Google Network properties are paid as TAC to our Google Network partners.

Operating Expenses

Operating expenses are generally incurred during our normal course of business, which we categorize as either R&D, sales and marketing, or general and administrative.

The main components of our R&D expenses are:

- compensation expenses for engineering and technical employees responsible for R&D related to our existing and new products and services;
- depreciation; and
- professional services fees primarily related to consulting and outsourcing services.

The main components of our sales and marketing expenses are:

- compensation expenses for employees engaged in sales and marketing, sales support, and certain customer service functions; and
- spending relating to our advertising and promotional activities in support of our products and services.

The main components of our general and administrative expenses are:

- compensation expenses for employees in finance, human resources, information technology, legal, and other administrative support functions;
- expenses related to legal matters, including fines and settlements; and
- professional services fees, including audit, consulting, outside legal, and outsourcing services.

Other Income (Expense), Net

Other income (expense), net primarily consists of interest income (expense), the effect of foreign currency exchange gains (losses), net gains (losses) and impairment on our marketable and non-marketable securities, performance fees, and income (loss) and impairment from our equity method investments.

For additional details, including how we account for our investments and factors that can drive fluctuations in the value of our investments, see Note 1 of the Notes to Consolidated Financial Statements included in Part II, Item 8 and Item 7A, "Quantitative and Qualitative Disclosures About Market Risk" in our Annual Report on Form 10-K for the fiscal year ended December 31, 2021 as well as Note 3 of the Notes to Consolidated Financial Statements included in Item 1 of this Quarterly Report on Form 10-Q.

Provision for Income Taxes

Provision for income taxes represents the estimated amount of federal, state, and foreign income taxes incurred in the U.S. and the many jurisdictions in which we operate. The provision includes the effect of reserve provisions and changes to reserves that are considered appropriate as well as the related net interest and penalties.

For additional details, see Note 1 of the Notes to Consolidated Financial Statements included in Part II, Item 8 in our Annual Report on Form 10-K for the fiscal year ended December 31, 2021 as well as Note 13 of the Notes to Consolidated Financial Statements included in Item 1 of this Quarterly Report on Form 10-Q.

Executive Overview

The following table summarizes consolidated financial results (in millions, except per share information, percentages, and number of employees):

	Three Months Ended September 30,		\$ Change	% Change
	2021	2022		
Consolidated revenues	\$ 65,118	\$ 69,092	\$ 3,974	6 %
Change in consolidated constant currency revenues				11 %
Cost of revenues	\$ 27,621	\$ 31,158	\$ 3,537	13 %
Operating expenses	\$ 16,466	\$ 20,799	\$ 4,333	26 %
Operating income	\$ 21,031	\$ 17,135	\$ (3,896)	(19)%
Operating margin	32 %	25 %		(7)%
Other income (expense), net	\$ 2,033	\$ (902)	\$ (2,935)	(144)%
Net Income	\$ 18,936	\$ 13,910	\$ (5,026)	(27)%
Diluted EPS	\$ 1.40	\$ 1.06	\$ (0.34)	(24)%
Number of Employees	150,028	186,779	36,751	24 %

- Revenues were \$69.1 billion, an increase of 6% year over year, primarily driven by an increase in Google Cloud segment revenues of \$1.9 billion, or 38%, and an increase in Google Services segment revenues of \$1.5 billion, or 2%. Hedging gains contributed approximately one percentage point to consolidated revenue growth.
- Total constant currency revenues, which exclude the effect of hedging, increased 11% year over year reflecting the strengthening of the U.S. dollar.
- Cost of revenues was \$31.2 billion, an increase of 13% year over year, primarily driven by an increase in other costs of revenues.
- Operating expenses were \$20.8 billion, an increase of 26% year over year, primarily driven by increases in compensation expenses due to headcount growth and advertising and promotional expenses.

Other information

- On September 12, 2022 we closed the acquisition of Mandiant for a total purchase price of \$6.1 billion and added over 2,600 employees. Mandiant's financial results are reported within Google Cloud as of the acquisition date. See Note 7 of the Notes to Consolidated Financial Statements included in Item 1 of this Quarterly Report on Form 10-Q for additional information.
- Beginning in the first quarter of 2022, we suspended the vast majority of our commercial activities in Russia and effectively ceased business activities of our Russian entity. The ongoing effect of these direct actions on our financial results was not material. The broader economic effects resulting from the war in Ukraine on our future financial results may be unpredictable.
- Repurchases of Class A and Class C shares were \$15.4 billion for the three months ended September 30, 2022. See Note 10 of the Notes to Consolidated Financial Statements included in Item 1 of this Quarterly Report on Form 10-Q for additional information.
- Operating cash flow was \$23.4 billion for the three months ended September 30, 2022.
- Capital expenditures of \$7.3 billion for the three months ended September 30, 2022 primarily relate to investments in technical infrastructure.

Financial Results

Revenues

The following table presents revenues by type (in millions):

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2021	2022	2021	2022
Google Search & other	\$ 37,926	\$ 39,539	\$ 105,650	\$ 119,846
YouTube ads	7,205	7,071	20,212	21,280
Google Network	7,999	7,872	22,396	24,305
Google advertising	53,130	54,482	148,258	165,431
Google other	6,754	6,895	19,871	20,259
Google Services total	59,884	61,377	168,129	185,690
Google Cloud	4,990	6,868	13,665	18,965
Other Bets	182	209	572	842
Hedging gains (losses)	62	638	(54)	1,291
Total revenues	<u>\$ 65,118</u>	<u>\$ 69,092</u>	<u>\$ 182,312</u>	<u>\$ 206,788</u>

Google Services

Google advertising revenues

Google Search & other

Google Search & other revenues increased \$1.6 billion and \$14.2 billion from the three and nine months ended September 30, 2021 to the three and nine months ended September 30, 2022, respectively. The overall growth was 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. Growth was partially offset by the unfavorable effect of foreign currency exchange rates.

YouTube ads

YouTube ads revenues decreased \$134 million from the three months ended September 30, 2021 to the three months ended September 30, 2022, as the unfavorable effect of foreign currency exchange rates more than offset growth in our brand and direct response advertising products.

YouTube ads revenues increased \$1.1 billion from the nine months ended September 30, 2021 to the nine months ended September 30, 2022. The growth was driven by our brand and direct response advertising products, both of which benefited from increased spending by our advertisers as well as improvements to ad formats and delivery. Growth was partially offset by the unfavorable effect of foreign currency exchange rates.

Google Network

Google Network revenues decreased \$127 million from the three months ended September 30, 2021 to the three months ended September 30, 2022, as the unfavorable effect of foreign currency exchange rates more than offset strength in AdSense.

Google Network revenues increased \$1.9 billion from the nine months ended September 30, 2021 to the nine months ended September 30, 2022. The growth was primarily driven by strength in AdSense and AdMob, partially offset by the unfavorable effect of foreign currency exchange rates.

Monetization Metrics*Paid clicks and cost-per-click*

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

	Three Months Ended September 30, 2022	Nine Months Ended September 30, 2022
Paid clicks change	8%	12%
Cost-per-click change	(5)%	1%

Paid clicks increased from the three and nine months ended September 30, 2021 to the three and nine months ended September 30, 2022 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; growth in advertiser spending; and improvements we have made in ad formats and delivery. The increase in clicks for the three months ended September 30, 2022 was partially offset by a decrease in clicks relating to ads on Google Play.

Cost-per-click decreased from the three months ended September 30, 2021 to the three months ended September 30, 2022 and increased from the nine months ended September 30, 2021 to the nine months ended September 30, 2022 due to a number of interrelated factors including changes in device mix, geographic mix, advertiser spending, ongoing product changes, and property mix, as well as the unfavorable effect of foreign currency exchange rates.

Impressions and cost-per-impression

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

	Three Months Ended September 30, 2022	Nine Months Ended September 30, 2022
Impressions change	3%	5%
Cost-per-impression change	(5)%	4%

Impressions increased from the three months ended September 30, 2021 to the three months ended September 30, 2022 primarily driven by growth in Google Ad Manager and AdSense, partially offset by a decline in impressions related to AdMob. The decrease in cost-per-impression from the three months ended September 30, 2021 to the three months ended September 30, 2022 was primarily driven by the unfavorable effect of foreign currency exchange rates.

Impressions increased from the nine months ended September 30, 2021 to the nine months ended September 30, 2022, driven by growth across Google Ad Manager, AdMob, and AdSense. The increase in cost-per-impression from the nine months ended September 30, 2021 to the nine months ended September 30, 2022 was driven by a number of interrelated factors including ongoing product and policy changes, improvements we have made in ad formats and delivery, changes in device mix, geographic mix, product mix, and property mix, partially offset by the unfavorable effect of foreign currency exchange rates.

Google other revenues

Google other revenues increased \$141 million from the three months ended September 30, 2021 to the three months ended September 30, 2022 primarily driven by growth in YouTube non-advertising followed by growth in hardware revenues, partially offset by a decrease in Google Play revenues. The growth in YouTube non-advertising was largely due to an increase in paid subscribers. The growth in hardware was primarily driven by an increase in phone sales. The decrease in Google Play revenues was primarily driven by a decrease in buyer spending. Additionally, the overall increase was partially offset by the unfavorable effect of foreign currency exchange rates.

Google other revenues increased \$388 million from the nine months ended September 30, 2021 to the nine months ended September 30, 2022 primarily driven by growth in YouTube non-advertising, partially offset by a decrease in Google Play revenues. The growth in YouTube non-advertising was largely due to an increase in paid subscribers. The decrease in Google Play revenues was primarily driven by the fee structure changes we

announced in 2021 as well as a decrease in buyer spending. Additionally, the overall increase was partially offset by the unfavorable effect of foreign currency exchange rates.

Google Cloud

Google Cloud revenues increased \$1.9 billion and \$5.3 billion from the three and nine months ended September 30, 2021 to the three and nine months ended September 30, 2022, 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.

Revenues by Geography

The following table presents 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,	
	2021	2022	2021	2022
United States	46 %	48 %	46 %	47 %
EMEA	30 %	28 %	31 %	29 %
APAC	18 %	17 %	18 %	17 %
Other Americas	6 %	6 %	5 %	6 %
Hedging gains (losses)	0 %	1 %	0 %	1 %

For further details on revenues by geography, see Note 2 of the Notes to Consolidated Financial Statements included in 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. 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 it excludes 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-on-year basis. Constant currency revenues are calculated by translating current period revenues using prior year comparable 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 year comparable period revenues where current period foreign currency revenues are translated using prior year comparable 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 international revenues and total revenues (in millions, except percentages):

	Three Months Ended September 30,		% Change from Prior Year	Nine Months Ended September 30,		% Change from Prior Year
	2021	2022		2021	2022	
EMEA revenues	\$ 19,839	\$ 19,450	(2) %	\$ 55,954	\$ 60,300	8 %
EMEA constant currency revenues		22,093	11 %		\$ 66,210	18 %
APAC revenues	11,705	11,494	(2) %	\$ 33,391	\$ 35,045	5 %
APAC constant currency revenues		12,604	8 %		\$ 37,510	12 %
Other Americas revenues	3,688	4,138	12 %	\$ 9,957	\$ 12,320	24 %
Other Americas constant currency revenues		4,303	17 %		\$ 12,536	26 %
United States revenues	29,824	33,372	12 %	\$ 83,064	\$ 97,832	18 %
Hedging gains (losses)	62	638		\$ (54)	\$ 1,291	
Total revenues	\$ 65,118	\$ 69,092	6 %	\$ 182,312	\$ 206,788	13 %
Revenues, excluding hedging effect	\$ 65,056	\$ 68,454		\$ 182,366	\$ 205,497	
Exchange rate effect		3,918			8,591	
Total constant currency revenues		\$ 72,372	11 %		\$ 214,088	17 %

EMEA revenue growth from the three and nine months ended September 30, 2021 to the three and nine months ended September 30, 2022 was unfavorably affected by changes in foreign currency exchange rates, primarily due to the U.S. dollar strengthening relative to the Euro and British pound.

APAC revenue growth from the three and nine months ended September 30, 2021 to the three and nine months ended September 30, 2022 was unfavorably affected by changes in foreign currency exchange rates, primarily due to the U.S. dollar strengthening relative to the Japanese yen.

Other Americas revenue growth from the three and nine months ended September 30, 2021 to the three and nine months ended September 30, 2022 was unfavorably affected by the general strengthening of the U.S. dollar.

Costs and Expenses

Cost of Revenues

The following table presents cost of revenues, including TAC (in millions, except percentages):

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2021	2022	2021	2022
TAC	\$ 11,498	\$ 11,826	\$ 32,139	\$ 36,030
Other cost of revenues	16,123	19,332	45,812	54,831
Total cost of revenues	\$ 27,621	\$ 31,158	\$ 77,951	\$ 90,861
Total cost of revenues as a percentage of revenues	42.4 %	45.1 %	42.8 %	43.9 %

Cost of revenues increased \$3.5 billion from the three months ended September 30, 2021 to the three months ended September 30, 2022 due to an increase in other cost of revenues and TAC of \$3.2 billion and \$328 million, respectively. Cost of revenues increased \$12.9 billion from the nine months ended September 30, 2021 to the nine months ended September 30, 2022 due to increases in other cost of revenues and TAC of \$9.0 billion and \$3.9 billion, respectively.

The increase in TAC from the three months ended September 30, 2021 to the three months ended September 30, 2022 was primarily due to increases in TAC paid to distribution partners primarily driven by growth in revenues

subject to TAC. The increase in TAC from the nine months ended September 30, 2021 to the nine months ended September 30, 2022 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 increased from 21.6% to 21.7% from the three months ended September 30, 2021 to the three months ended September 30, 2022 and increased from 21.7% to 21.8% from the nine months ended September 30, 2021 to the nine months ended September 30, 2022 due to a combination of factors, none of which were individually significant. The TAC rate on Google Search & other revenues and the TAC rate on Google Network revenues were both substantially consistent from three and nine months ended September 30, 2021 to the three and nine months ended September 30, 2022.

The increase in other cost of revenues from the three months ended September 30, 2021 to the three months ended September 30, 2022 was primarily due to increases in data center and other operations costs as well as hardware costs. The increase in other cost of revenues from the nine months ended September 30, 2021 to the nine months ended September 30, 2022 was primarily due to the increases in data center and other operations costs followed by hardware costs and content acquisition costs.

Research and Development

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

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2021	2022	2021	2022
Research and development expenses	\$ 7,694	\$ 10,273	\$ 22,854	\$ 29,233
Research and development expenses as a percentage of revenues	11.8 %	14.9 %	12.5 %	14.1 %

R&D expenses increased \$2.6 billion from the three months ended September 30, 2021 to the three months ended September 30, 2022. The increase was primarily driven by an increase in compensation expenses of \$1.8 billion, largely resulting from a 24% increase in headcount.

R&D expenses increased \$6.4 billion from the nine months ended September 30, 2021 to the nine months ended September 30, 2022. The increase was primarily driven by an increase in compensation expenses of \$4.2 billion, largely resulting from an 19% increase in headcount, and an increase in professional services fees of \$619 million.

Sales and Marketing

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

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2021	2022	2021	2022
Sales and marketing expenses	\$ 5,516	\$ 6,929	\$ 15,308	\$ 19,384
Sales and marketing expenses as a percentage of revenues	8.5 %	10.0 %	8.4 %	9.4 %

Sales and marketing expenses increased \$1.4 billion from the three months ended September 30, 2021 to the three months ended September 30, 2022. The increase was primarily driven by an increase in advertising and promotional activities of \$708 million and an increase in compensation expenses of \$515 million, largely resulting from a 19% increase in headcount.

Sales and marketing expenses increased \$4.1 billion from the nine months ended September 30, 2021 to the nine months ended September 30, 2022 primarily driven by an increase in advertising and promotional activities of \$1.8 billion and an increase in compensation expenses of \$1.7 billion, largely resulting from a 20% increase in headcount.

General and Administrative

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

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2021	2022	2021	2022
General and administrative expenses	\$ 3,256	\$ 3,597	\$ 9,370	\$ 10,628
General and administrative expenses as a percentage of revenues	5.0 %	5.2 %	5.1 %	5.1 %

General and administrative expenses increased \$341 million from the three months ended September 30, 2021 to the three months ended September 30, 2022. The increase was primarily driven by an increase in compensation expenses of \$385 million, largely resulting from a 23% increase in headcount, and an increase in professional services fees of \$214 million. The overall increase was partially offset by a decrease in charges related to legal matters of \$228 million, including the \$217 million reduction of the EC fine imposed in 2018. For further details on the EC fine imposed in 2018, see Note 9 of the Notes to Consolidated Financial Statements included in Item 1 of this Quarterly Report on Form 10-Q.

General and administrative expenses increased \$1.3 billion from the nine months ended September 30, 2021 to the nine months ended September 30, 2022. The increase was primarily driven by an increase in compensation expenses of \$985 million, largely resulting from a 21% increase in headcount, and an increase in professional services fees of \$811 million. The overall increase was partially offset by a decrease in charges related to legal matters of \$1.0 billion.

Segment Profitability

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

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2021	2022	2021	2022
Operating income (loss):				
Google Services	\$ 23,973	\$ 19,781	\$ 65,862	\$ 65,471
Google Cloud	(644)	(699)	(2,209)	(2,488)
Other Bets	(1,288)	(1,611)	(3,831)	(4,452)
Corporate costs, unallocated ⁽¹⁾	(1,010)	(336)	(2,993)	(1,849)
Total income from operations	\$ 21,031	\$ 17,135	\$ 56,829	\$ 56,682

⁽¹⁾ 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 R&D activities. Additionally, hedging gains (losses) related to revenue are included in corporate costs.

Google Services

Google Services operating income decreased \$4.2 billion from the three months ended September 30, 2021 to the three months ended September 30, 2022. The decrease in operating income was primarily driven by increases in compensation expenses, hardware costs, and advertising and promotional activities, partially offset by growth in revenues.

Google Services operating income decreased \$391 million from the nine months ended September 30, 2021 to the nine months ended September 30, 2022. The decrease in operating income was primarily driven by increases in compensation expenses and TAC, partially offset by growth in revenues.

Google Cloud

Google Cloud operating loss increased \$55 million and \$279 million from the three and nine months ended September 30, 2021 to the three and nine months ended September 30, 2022, respectively. The increase in operating loss was primarily driven by an increase in expenses, primarily driven by compensation expenses, partially offset by growth in revenues.

Other Bets

Other Bets operating loss increased \$323 million from the three months ended September 30, 2021 to the three months ended September 30, 2022. The increase in operating loss was primarily driven by an increase in compensation expenses.

Other Bets operating loss increased \$621 million from the nine months ended September 30, 2021 to the nine months ended September 30, 2022. The increase in operating loss was primarily driven by increases in compensation expenses, partially offset by growth in revenues.

Other Income (Expense), Net

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

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2021	2022	2021	2022
Other income (expense), net	\$ 2,033	\$ (902)	\$ 9,503	\$ (2,501)

Other income (expense), net, decreased \$2.9 billion from the three months ended September 30, 2021 to the three months ended September 30, 2022 primarily due to changes in gains and losses on equity and debt securities. In the three months ended September 30, 2022, \$731 million of net losses were recognized on debt securities, and \$492 million of net unrealized losses were recognized on non-marketable equity securities. These losses were partially offset by interest income recognized of \$615 million. In the three months ended September 30, 2021, \$2.2 billion of net unrealized gains were recognized on marketable and non-marketable equity securities, partially offset by \$492 million of accrued performance fees related to certain investments.

Other income (expense), net, decreased \$12.0 billion from the nine months ended September 30, 2021 to the nine months ended September 30, 2022 primarily due changes in gains and losses on equity securities and performance fees. In the nine months ended September 30, 2022, \$2.5 billion of net unrealized losses were recognized on marketable equity securities and \$1.9 billion of net losses were recognized on debt securities. These losses were partially offset by interest income recognized of \$1.5 billion and \$879 million of net unrealized gains on non-marketable equity securities. In the nine months ended September 30, 2021, \$9.2 billion of net unrealized gains were recognized on marketable and non-marketable equity securities, partially offset by \$1.7 billion of accrued performance fees related to certain investments.

See Note 3 of the Notes to Consolidated Financial Statements included in Item 1 of this Quarterly Report on Form 10-Q for further information.

Provision for Income Taxes

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

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2021	2022	2021	2022
Income before provision for income taxes	\$ 23,064	\$ 16,233	\$ 66,332	\$ 54,181
Provision for income taxes	\$ 4,128	\$ 2,323	\$ 10,941	\$ 7,833
Effective tax rate	17.9 %	14.3 %	16.5 %	14.5 %

The effective tax rate decreased by 3.6 percentage points from the three months ended September 30, 2021 to the three months ended September 30, 2022. The decrease was primarily driven by a change in unrecognized tax benefits and the effects of capitalization and amortization of R&D expenses starting in 2022 as required by the 2017 Tax Cuts and Jobs Act generating an increase in the U.S. federal Foreign-Derived Intangible Income tax deduction. These decreases were partially offset by a decrease in pre-tax earnings, including in countries that have lower statutory rates and a decrease in the stock-based compensation-related tax benefit.

The effective tax rate decreased by 2.0 percentage points from the nine months ended September 30, 2021 to the nine months ended September 30, 2022. The decrease was primarily driven by the effects of capitalization and amortization of R&D expenses starting in 2022 as required by the 2017 Tax Cuts and Jobs Act generating an increase in the U.S. federal Foreign-Derived Intangible Income tax deduction and a change in unrecognized tax benefits. These decreases were partially offset by a decrease in pre-tax earnings, including in countries that have lower statutory rates and a decrease in the stock-based compensation-related tax benefit.

Financial Condition

Cash, Cash Equivalents, and Marketable Securities

As of September 30, 2022, we had \$116.3 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 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,	
	2021	2022
Net cash provided by operating activities	\$ 66,718	\$ 67,881
Net cash used in investing activities	\$ (24,507)	\$ (14,071)
Net cash used in financing activities	\$ (44,851)	\$ (52,128)

Cash Provided by Operating Activities

Our largest source of cash provided by operations are advertising revenues generated by Google Search & other properties, Google Network properties and YouTube ads. Additionally, we generate cash through sales of apps and 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 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 costs, income taxes, and other general corporate expenditures.

Net cash provided by operating activities increased from the nine months ended September 30, 2021 to the nine months ended September 30, 2022 primarily due to increases in cash received from revenues, partially offset by increases in cash paid for cost of revenues and operating expenses, and an increase in tax payments driven by the effects of capitalization and amortization of R&D expenses beginning in 2022 as required by the 2017 Tax Cuts and Jobs Act, and other working capital.

Cash Used in Investing Activities

Cash provided by investing activities consists primarily of maturities and sales of 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, 2021 to the nine months ended September 30, 2022 primarily due to a net decrease in cash used for purchases, sales and maturities of marketable securities, partially offset by an increase of 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 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, 2021 to the nine months ended September 30, 2022 primarily due to an increase in repurchases of stock.

Liquidity and Material Cash Requirements

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

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.

Capital Expenditures

Our capital investments in property and equipment consist primarily of the following major categories:

- technical infrastructure, which consists of investments in servers and network equipment for computing, storage and networking requirements for ongoing business activities, including machine learning (collectively referred to as information technology assets) and data center land and building construction; and
- office facilities, ground up development projects, and related building improvements.

Construction in progress consists primarily of technical infrastructure and office facilities which have not yet been placed in service for our intended use. The time frame from date of purchase to placement in service of these assets may extend from months to years. For example, our data center construction projects are generally multi-year projects with multiple phases, where we acquire qualified land and buildings, construct buildings, and secure and install information technology assets.

During the nine months ended September 30, 2021 and 2022, capital expenditures were \$18.3 billion and \$23.9 billion, respectively. Depreciation of our property and equipment commences when the deployment of such assets are completed and are ready for our intended use. Land is not depreciated. For the nine months ended September 30, 2021 and 2022, depreciation and impairment expenses on property and equipment were \$8.3 billion and \$11.2 billion, respectively.

Leases

For the nine months ended September 30, 2021 and 2022, we recognized total operating lease assets of \$2.2 billion and \$3.4 billion, respectively. As of September 30, 2022, the amount of total future lease payments under operating leases, which had a weighted average remaining lease term of 9 years, was \$16.8 billion. As of September 30, 2022, we have entered into leases that have not yet commenced with future lease payments of \$4.1 billion, excluding purchase options, that are not yet recorded on our Consolidated Balance Sheets. These leases will commence between 2022 and 2026 with non-cancelable lease terms of 1 to 25 years.

For the nine months ended September 30, 2021 and 2022, our operating lease expenses (including variable lease costs) were \$2.5 billion and \$2.7 billion, respectively. Finance lease costs were not material for the nine months ended September 30, 2021 and 2022.

Financing

We have a short-term debt financing program of up to \$10.0 billion through the issuance of commercial paper. Net proceeds from this program are used for general corporate purposes. As of September 30, 2022, we had no commercial paper outstanding.

As of September 30, 2022, we had \$10.0 billion of revolving credit facilities, \$4.0 billion expiring in April 2023 and \$6.0 billion expiring in April 2026. The interest rates for all 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 credit facilities.

As of September 30, 2022, we had senior unsecured notes outstanding with a total carrying value of \$12.9 billion. See Note 5 of the Notes to Consolidated Financial Statements included in Item 1 of this Quarterly Report on Form 10-Q for further information on our debt.

Share Repurchase Program

In April 2022, the Board of Directors of Alphabet authorized the company to repurchase up to \$70.0 billion of its Class A and Class C shares. As of September 30, 2022, \$43.5 billion remains available for Class A and Class C share repurchases. In accordance with the authorization of the Board of Directors of Alphabet, during the three and nine months ended September 30, 2022, we repurchased and subsequently retired 138 million and 369 million aggregate shares for \$15.4 billion and \$43.9 billion, respectively. Of the aggregate amount repurchased and subsequently retired during the three months ended September 30, 2022, 25 million shares were Class A stock for \$2.7 billion and 113 million shares were Class C stock for \$12.7 billion. Of the aggregate amount repurchased and

subsequently retired during the nine months ended September 30, 2022, 46 million shares were Class A stock for \$5.2 billion and 323 million shares were Class C stock for \$38.7 billion.

European Commission Fines

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. On September 14, 2022, the General Court rejected our appeal on three claims, accepted our appeal on one claim, and reduced the fine to €4.1 billion. We are preparing to appeal to the European Court of Justice. In the second quarter of 2018 we recognized a charge of \$5.1 billion for the fine, which we reduced by \$217 million in the third quarter of 2022.

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. For further details, see Note 9 of the Notes to Consolidated Financial Statements included in Item 1 of this Quarterly Report on Form 10-Q.

Taxes

As of September 30, 2022, we had short-term and long-term income taxes payable of \$1.6 billion and \$4.2 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. We also have taxes payable of \$4.4 billion primarily related to uncertain tax positions as of September 30, 2022.

Critical Accounting Estimates

See Part II, Item 7, "Critical Accounting Estimates" in our Annual Report on Form 10-K for the year ended December 31, 2021.

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

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, 2021.

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, 2022, 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 replaced 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. We have now completed implementation of the most significant modules planned to date. There have been no changes in our internal control over financial reporting that occurred during the quarter ended September 30, 2022 that have materially affected, or are reasonably likely to materially affect, our internal control over financial reporting.

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, 2021, which could adversely affect our business, financial condition, results of operations, cash flows, and the trading price of our stock. Below are material changes to our risk factors since our Annual Report on Form 10-K for the year ended December 31, 2021.

A variety of new and existing laws and/or interpretations could harm our business.

We are subject to numerous U.S. and foreign laws and regulations covering a wide variety of subject matters. New laws and regulations, or new interpretations or applications of existing laws and regulations in a manner inconsistent with our practices, have made, and may continue to make, our products and services less useful, limit our ability to pursue certain business models or offer certain products and services in certain jurisdictions, require us to incur substantial costs, expose us to civil or criminal liability, or cause us to change our business practices. These laws and regulations are evolving and involve matters central to our business, including, among others:

- Laws and regulations around the world focused on large technology platforms, including the Digital Markets Act in the European Union and proposed antitrust legislation on self-preferencing and mergers and acquisitions in the U.S., which may limit certain business practices, and in some cases, create the risk of significant penalties.
- Privacy laws, such as the GDPR, CCPA, CPRA, Virginia CDPA, and ColoPA (as defined and discussed further below).
- Data protection laws passed by many states within the U.S. and by certain countries regarding notification to data subjects and/or regulators when there is a security breach of personal data.
- Consumer protection laws, including EU’s New Deal for Consumers, which could result in monetary penalties and create a range of new compliance obligations.
- New laws further restricting the collection, processing and/or sharing of advertising-related data. Copyright or similar laws around the world, including the EU Directive on Copyright in the Digital Single Market (EUCD) and EU member state transpositions. These and similar laws that have been adopted or proposed introduce new licensing regimes that could affect our ability to operate. The EUCD and similar laws could also increase the liability of some content-sharing services with respect to content uploaded by their users. Some of these laws, as well as follow-on administrative or judicial actions, have also created or may create a new property right in news publications that limits the ability of some online services to link to, interact with, or present such content. They may also require individual or collective compensation negotiations with news agencies and publishers for the use of such content, which may result in payment obligations that significantly exceed the value that such content provides to Google and its users, potentially harming our services, commercial operations, and business results.
- Data localization laws, which generally mandate that certain types of data collected in a particular country be stored and/or processed within that country.
- Various U.S. and international laws that govern the distribution of certain materials to children and regulate the ability of online services to collect information from minors, including the Children’s Online Privacy Protection Act of 1998 and the United Kingdom’s Age-Appropriate Design Code.
- Various laws with regard to content moderation and removal, and related disclosure obligations, such as Germany’s Network Enforcement Act, the European Union’s Digital Services Act, Florida’s Senate Bill 7072 and Texas’ House Bill 20, which may affect our businesses and operations and may subject us to significant litigation, damage claims, and fines if they are interpreted and applied in a manner inconsistent with our practices and policies, or if we remove or promote (or fail to remove or promote) content in ways inconsistent with those laws. Other countries, including Singapore, Australia, and the United Kingdom, have implemented or are considering similar legislation imposing penalties for failure to remove certain types of content.

- Various legislative, litigation, and regulatory activity regarding our Google Play billing policies and business model, which could result in monetary penalties, damages and/or prohibition.
- Various legislative and regulatory activity requiring disclosure of information about the operation of our services and algorithms, which may make it easier for websites to artificially promote low-quality, deceptive, or harmful content on services like Google Search and YouTube, potentially harming the quality of our services.

In addition, the applicability and scope of these and other laws, as interpreted by the courts, remain uncertain and could be interpreted in ways that harm our business. For example:

- We rely on statutory safe harbors, like those set forth in the Digital Millennium Copyright Act and Section 230 of the Communications Decency Act in the U.S. and the E-Commerce Directive in Europe, against liability for various linking, caching, ranking, recommending, and hosting activities. Any legislation or court rulings affecting these safe harbors may adversely affect us and may impose significant operational challenges. There are legislative proposals and pending litigation in both the U.S. (such as *Gonzalez v. Google*) and EU that could diminish or eliminate safe harbor protection for websites and online platforms.
- Court decisions such as the judgment of the Court of Justice of the European Union (CJEU) on May 13, 2014 on the 'right to be forgotten,' which allows individuals to demand that Google remove search results about them in certain instances, may limit the content we can show to our users and impose significant operational burdens.

The introduction of new businesses, products, services, and technologies, our activities in certain jurisdictions, or other actions we take have subjected us, and will likely continue to subject us, to additional laws and regulations. Our investment in a variety of new fields, such as healthcare and payment services, has expanded, and will continue to expand, the scope of regulations that apply to our business. The costs of compliance with these laws and regulations are high and are likely to increase in the future. Any failure on our part to comply with laws and regulations can result in negative publicity and diversion of management time and effort and may subject us to significant liabilities and other penalties.

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 and Class C stock during the quarter ended September 30, 2022.

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	8,479	37,461	\$ 112.62	\$ 113.29	45,940	\$ 53,675
August 1 - 31	8,477	39,176	\$ 115.95	\$ 117.10	47,653	\$ 48,104
September 1 - 30	7,583	36,588	\$ 104.57	\$ 104.66	44,171	\$ 43,482
Total	24,539	113,225			137,764	

⁽¹⁾ Repurchases are 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 5. OTHER INFORMATION

Under Section 13(r) of the Exchange Act, we are required to disclose if we or any of our affiliates knowingly conducted a transaction or dealing with entities or individuals designated pursuant to certain Executive Orders. The U.S. government has designated the Russian Federal Security Service (the “FSB”) pursuant to one of those Executive Orders, and the U.S. Department of the Treasury’s Office of Foreign Assets Control has accordingly updated General License No. 1B (the “OFAC General License”), which generally permits U.S. persons to engage in transactions and activities prohibited by the relevant Executive Order involving the FSB that are necessary and ordinarily incident to requesting, receiving, utilizing, paying for or dealing in licenses, permits, certifications, or notifications issued or registered by the FSB for the importation, distribution, or use of information technology products in Russia.

In the past year and during the quarter ended September 30, 2022, Google LLC, a subsidiary of Alphabet, filed notifications with the FSB as required pursuant to Russian encryption product import controls for the purpose of enabling the import of certain software in Russia. Neither we nor our subsidiaries generated any gross revenues or net profits directly from such approval activity and neither we nor our subsidiaries sell to the FSB. Alphabet expects that Google LLC will continue to file these notifications as required under Russia law.

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.

SIGNATURES

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.

October 25, 2022

ALPHABET INC.
By: /s/ RUTH M. PORAT

Ruth M. Porat
Senior Vice President and Chief Financial Officer

October 25, 2022

ALPHABET INC.
By: /s/ AMIE THUENER O'TOOLE

Amie Thuener O'Toole
Vice President and Chief Accounting Officer

**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 25, 2022

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

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

I, Ruth Porat, certify that:

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

Date: October 25, 2022

/s/ RUTH PORAT
 Ruth Porat
 Senior Vice President and
 Chief Financial Officer
 (Principal Financial Officer)

**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, 2022, 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 25, 2022

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, 2022, 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 25, 2022

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.