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, 2017

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)

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 and posted on its corporate Web site, if any, every Interactive Data File required to be submitted and posted 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 and post 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, or an emerging growth company. See the definitions of "large accelerated filer," "accelerated filer," "smaller reporting company," and "emerging growth company" in Rule 12b-2 of the Exchange Act.

Large accelerated filer	☒	Accelerated filer	☐
Non-accelerated filer (Do not check if a smaller reporting company)	☐	Smaller reporting company	☐
Emerging growth company	☐		

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

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

As of October 19, 2017, there were 298,279,094 shares of Alphabet's Class A common stock outstanding, 47,043,867 shares of Alphabet's Class B common stock outstanding, and 349,479,150 shares of Alphabet's Class C capital stock outstanding.

Alphabet Inc.
Form 10-Q
For the Quarterly Period Ended September 30, 2017

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NOTE ABOUT FORWARD-LOOKING STATEMENTS

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

- the growth of our business and revenues and our expectations about the factors that influence our success and trends in our business;
- our plans to continue to invest in new businesses, products, services and technologies, systems, facilities, and infrastructure, to continue to hire aggressively and provide competitive compensation programs, as well as to continue to invest in acquisitions;
- seasonal fluctuations in internet usage and advertiser expenditures, underlying business trends such as traditional retail seasonality, and macroeconomic conditions, which are likely to cause fluctuations in our quarterly results;
- the potential for declines in our revenue growth rate;
- our expectation that we will continue to take steps to improve the relevance of the ads we deliver and to reduce the number of accidental clicks;
- fluctuations in the rate of change in revenue and revenue growth, as well as the rate of change in paid clicks and average cost-per-click and various factors contributing to such fluctuations;
- 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 costs related to hedging activities under our foreign exchange risk management program;
- our expectation that our cost of revenues, research and development expenses, sales and marketing expenses, and general and administrative expenses will increase in dollars and may increase as a percentage of revenues;
- our potential exposure in connection with pending investigations, proceedings, and other contingencies;
- our expectation that our monetization trends will fluctuate, which could affect our revenues and margins in the future;
- our expectation that our traffic acquisition costs will increase in the future;
- our expectation that our results will be impacted by our performance in international markets as users in developing economies increasingly come online;
- our expectation that the portion of our revenues that we derive from non-advertising revenues will continue to increase;
- our expectation that our other income (loss), net, will fluctuate in the future as it is largely driven by market dynamics;
- estimates of our future compensation expenses;
- fluctuations in our effective tax rate;
- the sufficiency of our sources of funding;
- our payment terms to certain advertisers, which may increase our working capital requirements;
- fluctuations in our capital expenditures;
- our expectations related to the operating structure implemented pursuant to the Alphabet holding company reorganization;
- the expected timing and amount of Alphabet Inc.'s stock repurchases;

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, 2016, as may be updated in our subsequent Quarterly Reports 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, 2016, and those discussed in other documents we file with the SEC. We undertake no obligation to revise or publicly release the results of any revision to these forward-looking statements, except as required by law. Given these risks and uncertainties, readers are cautioned not to place undue reliance on such forward-looking statements.

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

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

PART I. FINANCIAL INFORMATION

ITEM 1. FINANCIAL STATEMENTS

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

	As of December 31, 2016	As of September 30, 2017
		(unaudited)
Assets		
Current assets:		
Cash and cash equivalents	$ 12,918	$ 10,581
Marketable securities	73,415	89,562
Total cash, cash equivalents, and marketable securities	86,333	100,143
Accounts receivable, net of allowance of $467 and $625	14,137	15,295
Income taxes receivable, net	95	282
Inventory	268	765
Other current assets	4,575	2,860
Total current assets	105,408	119,345
Non-marketable investments	5,878	7,269
Deferred income taxes	383	505
Property and equipment, net	34,234	40,120
Intangible assets, net	3,307	2,883
Goodwill	16,468	16,731
Other non-current assets	1,819	2,683
Total assets	$ 167,497	$ 189,536
Liabilities and Stockholders' Equity		
Current liabilities:		
Accounts payable	$ 2,041	$ 2,674
Accrued compensation and benefits	3,976	4,022
Accrued expenses and other current liabilities	6,144	9,307
Accrued revenue share	2,942	3,200
Deferred revenue	1,099	1,269
Income taxes payable, net	554	221
Total current liabilities	16,756	20,693
Long-term debt	3,935	3,964
Deferred revenue, non-current	202	346
Income taxes payable, non-current	4,677	4,358
Deferred income taxes	226	151
Other long-term liabilities	2,665	2,924
Total liabilities	28,461	32,436
Commitments and Contingencies (Note 11)		

Stockholders’ equity:		
Convertible preferred stock, $0.001 par value per share, 100,000 shares authorized; no shares issued and outstanding	0	0
Class A and Class B common stock, and Class C capital stock and additional paid-in capital, $0.001 par value per share: 15,000,000 shares authorized (Class A 9,000,000, Class B 3,000,000, Class C 3,000,000); 691,293 (Class A 296,992, Class B 47,437, Class C 346,864) and 694,790 (Class A 298,263, Class B 47,054, Class C 349,473) shares issued and outstanding	36,307	39,609
Accumulated other comprehensive loss	(2,402)	(746)
Retained earnings	105,131	118,237
Total stockholders’ equity	139,036	157,100
Total liabilities and stockholders’ equity	$ 167,497	$ 189,536

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,	
	2016	2017	2016	2017
Revenues	$ 22,451	$ 27,772	$ 64,208	$ 78,532
Costs and expenses:				
Cost of revenues	8,699	11,148	24,477	31,316
Research and development	3,596	4,205	10,326	12,319
Sales and marketing	2,565	3,042	7,367	8,583
General and administrative	1,824	1,595	4,961	5,096
European Commission fine	0	0	0	2,736
Total costs and expenses	16,684	19,990	47,131	60,050
Income from operations	5,767	7,782	17,077	18,482
Other income (expense), net	278	197	216	693
Income before income taxes	6,045	7,979	17,293	19,175
Provision for income taxes	984	1,247	3,148	3,493
Net income	$ 5,061	$ 6,732	$ 14,145	$ 15,682
Basic net income per share of Class A and B common stock and Class C capital stock	$ 7.36	$ 9.71	$ 20.59	$ 22.65
Diluted net income per share of Class A and B common stock and Class C capital stock	$ 7.25	$ 9.57	$ 20.26	$ 22.30

See accompanying notes.

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

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2016	2017	2016	2017
Net income	$ 5,061	$ 6,732	$ 14,145	$ 15,682
Other comprehensive income:				
Change in foreign currency translation adjustment	129	441	166	1,457
Available-for-sale investments:				
Change in net unrealized gains (losses)	71	578	627	803
Less: reclassification adjustment for net (gains) losses included in net income	(46)	47	137	98
Net change (net of tax effect of $7, $0, $191, and $0)	25	625	764	901
Cash flow hedges:				
Change in net unrealized gains (losses)	32	(209)	148	(668)
Less: reclassification adjustment for net (gains) losses included in net income	(67)	125	(236)	(34)
Net change (net of tax effect of $20, $50, $29, and $342)	(35)	(84)	(88)	(702)
Other comprehensive income	119	982	842	1,656
Comprehensive income	$ 5,180	$ 7,714	$ 14,987	$ 17,338

See accompanying notes.

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

	Nine Months Ended September 30,	
	2016	2017
Operating activities		
Net income	$ 14,145	$ 15,682
Adjustments:		
Depreciation and impairment of property and equipment	3,803	4,272
Amortization and impairment of intangible assets	654	617
Stock-based compensation expense	4,857	5,832
Deferred income taxes	119	242
Loss on marketable and non-marketable investments, net	204	160
Other	117	99
Changes in assets and liabilities, net of effects of acquisitions:		
Accounts receivable	(299)	(719)
Income taxes, net	2,153	(865)
Other assets	114	(2,086)
Accounts payable	238	58
Accrued expenses and other liabilities	338	3,121
Accrued revenue share	138	182
Deferred revenue	42	228
Net cash provided by operating activities	26,623	26,823
Investing activities		
Purchases of property and equipment	(7,134)	(8,877)
Proceeds from disposals of property and equipment	226	81
Purchases of marketable securities	(70,959)	(78,709)
Maturities and sales of marketable securities	54,379	62,588
Purchases of non-marketable investments	(862)	(871)
Maturities and sales of non-marketable investments	189	215
Cash collateral related to securities lending	(2,428)	0
Investments in reverse repurchase agreements	450	0
Acquisitions, net of cash acquired, and purchases of intangible assets	(324)	(273)
Proceeds from collection of notes receivable	0	1,419
Net cash used in investing activities	(26,463)	(24,427)
Financing activities		
Net payments related to stock-based award activities	(2,425)	(3,111)
Repurchases of capital stock	(3,693)	(2,745)
Proceeds from issuance of debt, net of costs	8,729	2,698
Repayments of debt	(10,051)	(2,762)
Proceeds from sale of subsidiary shares	0	800
Net cash used in financing activities	(7,440)	(5,120)
Effect of exchange rate changes on cash and cash equivalents	137	387
Net decrease in cash and cash equivalents	(7,143)	(2,337)
Cash and cash equivalents at beginning of period	16,549	12,918
Cash and cash equivalents at end of period	$ 9,406	$ 10,581

See accompanying notes.

Alphabet Inc.
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS
(Unaudited)

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

Nature of Operations

Google Inc. (Google) was incorporated in California in 1998 and re-incorporated in Delaware in 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 primarily by delivering relevant, cost-effective online advertising.

Basis of Consolidation

The consolidated financial statements of Alphabet include the accounts of Alphabet and all wholly-owned subsidiaries as well as all variable interest entities where we are the primary beneficiary. All intercompany balances and transactions have been eliminated.

Unaudited Interim Financial Information

The accompanying Consolidated Balance Sheet as of September 30, 2017, the Consolidated Statements of Income for the three and nine months ended September 30, 2016 and 2017, the Consolidated Statements of Comprehensive Income for the three and nine months ended September 30, 2016 and 2017, and the Consolidated Statements of Cash Flows for the nine months ended September 30, 2016 and 2017 are unaudited. These unaudited interim consolidated financial statements have been prepared in accordance with generally accepted accounting principles in the United States (GAAP). In our opinion, the unaudited interim consolidated financial statements include all adjustments of a normal recurring nature necessary for the fair presentation of our financial position as of September 30, 2017, our results of operations for the three and nine months ended September 30, 2016 and 2017, and our cash flows for the nine months ended September 30, 2016 and 2017. The results of operations for the three and nine months ended September 30, 2017 are not necessarily indicative of the results to be expected for the year ending December 31, 2017.

These unaudited interim consolidated financial statements should be read in conjunction with the consolidated financial statements and related notes included in our Annual Report on Form 10-K for the fiscal year ended December 31, 2016, filed with the SEC on February 2, 2017.

Use of Estimates

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

Fair Value of Financial Instruments

Our financial assets and financial liabilities including cash equivalents, marketable securities, foreign currency and interest rate derivative contracts, and non-marketable debt securities are measured and recorded at fair value on a recurring basis. We measure certain financial assets at fair value for disclosure purposes, as well as on a nonrecurring basis when they are deemed to be other-than-temporarily impaired. Our other current financial assets and our other current financial liabilities have fair values that approximate their carrying values.

Fair value is an exit price, representing the amount that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants. As such, fair value is a market-based measurement that is determined based on assumptions that market participants would use in pricing an asset or a liability. Assets and liabilities recorded at fair value are measured and classified in accordance with a three-tier fair value hierarchy based on the observability of the inputs available in the market used to measure fair value:

Level 1 - Observable inputs that reflect quoted prices (unadjusted) for identical assets or liabilities in active markets.

Level 2 - Include other inputs that are based upon quoted prices for similar instruments in active markets, quoted prices for identical or similar instruments in markets that are not active, and model-based valuation techniques for which all significant inputs are observable in the market or can be derived from observable market data. Where applicable, these models project future cash flows and discount the future amounts to a present value using market-based observable inputs including interest rate curves, foreign exchange rates, and credit ratings.

Level 3 - Unobservable inputs that are supported by little or no market activities.

The fair value hierarchy requires an entity to maximize the use of observable inputs and minimize the use of unobservable inputs when measuring fair value.

Recent Accounting Pronouncements

Recently issued accounting pronouncements not yet adopted

In January 2016, the Financial Accounting Standards Board (FASB) issued Accounting Standards Update No. 2016-01 (ASU 2016-01) "Financial Instruments-Overall (Subtopic 825-10): Recognition and Measurement of Financial Assets and Financial Liabilities." ASU 2016-01 amends various aspects of the recognition, measurement, presentation, and disclosure of financial instruments. ASU 2016-01 is effective for annual reporting periods and interim periods within those years beginning after December 15, 2017. The most significant impact to our consolidated financial statements relates to the recognition and measurement of equity investments at fair value in our consolidated statement of income. We expect to elect the measurement alternative, defined as cost, less impairments, adjusted by observable price changes. We anticipate that the adoption of ASU 2016-01 will increase the volatility of our other income (expense), net, as a result of the remeasurement of our equity securities upon the occurrence of observable price changes and impairments.

In February 2016, the FASB issued Accounting Standards Update No. 2016-02 (Topic 842) "Leases." Topic 842 supersedes the lease recognition requirements in Accounting Standards Codification (ASC) Topic 840, "Leases." Under Topic 842, lessees are required to recognize assets and liabilities on the balance sheet for most leases and provide enhanced disclosures. Leases will continue to be classified as either finance or operating. Topic 842 is effective for annual reporting periods and interim periods within those years beginning after December 15, 2018. Early adoption by public entities is permitted. Entities are required to use a modified retrospective approach for leases that exist or are entered into after the beginning of the earliest comparative period in the financial statements, and there are certain optional practical expedients that an entity may elect to apply. Full retrospective application is prohibited. We anticipate that the adoption of Topic 842 will materially affect our Consolidated Balance Sheets. We are in the process of implementing changes to our systems and processes in conjunction with our review of existing lease agreements. We plan to adopt Topic 842 effective January 1, 2019 and we are evaluating the use of the optional practical expedients.

In June 2016, the FASB issued Accounting Standards Update No. 2016-13 (ASU 2016-13) "Financial Instruments-Credit Losses (Topic 326): Measurement of Credit Losses on Financial Instruments" which requires the measurement and recognition of expected credit losses for financial assets held at amortized cost. ASU 2016-13 replaces the existing incurred loss impairment model with an expected loss methodology, which will result in more timely recognition of credit losses. ASU 2016-13 is effective for annual reporting periods, and interim periods within those years beginning after December 15, 2019. We are currently in the process of evaluating the impact of the adoption of ASU 2016-13 on our consolidated financial statements.

In October 2016, the FASB issued Accounting Standards Update No. 2016-16 (ASU 2016-16) "Income Taxes (Topic 740): Intra-Entity Transfers of Assets Other than Inventory." ASU 2016-16 generally accelerates the recognition of income tax consequences for asset transfers between entities under common control. ASU 2016-16 is effective for annual reporting periods and interim periods within those years beginning after December 15, 2017. Entities are required to adopt using a modified retrospective approach with a cumulative adjustment to retained earnings for previously unrecognized income tax expense. We anticipate a retained earnings adjustment of $600 million to $800 million upon adoption related to the unrecognized income tax effects of asset transfers that occurred prior to adoption.

In January 2017, the FASB issued Accounting Standards Update No. 2017-04 (ASU 2017-04) “Intangibles-Goodwill and Other (Topic 350): Simplifying the Test for Goodwill Impairment.” ASU 2017-04 eliminates step two of the goodwill impairment test and specifies that goodwill impairment should be measured by comparing the fair value of a reporting unit with its carrying amount. Additionally, the amount of goodwill allocated to each reporting unit with a zero or negative carrying amount of net assets should be disclosed. ASU 2017-04 is effective for annual or interim goodwill impairment tests performed in fiscal years beginning after December 15, 2019; early adoption is permitted. We currently anticipate that the adoption of ASU 2017-04 will not have a material impact on our consolidated financial statements.

Recently adopted accounting pronouncements

In May 2014, the FASB issued Accounting Standards Update No. 2014-09 (Topic 606) "Revenue from Contracts with Customers." Topic 606 supersedes the revenue recognition requirements in Topic 605 "Revenue Recognition" (Topic 605), and requires entities to recognize revenue when control of the promised goods or services is transferred to customers at an amount that reflects the consideration to which the entity expects to be entitled to in exchange for those goods or services. We adopted Topic 606 as of January 1, 2017 using the modified retrospective transition method. See Note 2 for further details.

In January 2017, the FASB issued Accounting Standards Update No. 2017-01 (ASU 2017-01) "Business Combinations (Topic 805): Clarifying the Definition of a Business." ASU 2017-01 provides guidance to evaluate whether transactions should be accounted for as acquisitions (or disposals) of assets or businesses. If substantially all of the fair value of the gross assets acquired (or disposed of) is concentrated in a single asset or a group of similar assets, the assets acquired (or disposed of) are not considered a business. We adopted ASU 2017-01 as of January 1, 2017 on a prospective basis.

Prior Period Reclassifications

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

Note 2. Revenues

Adoption of ASC Topic 606, "Revenue from Contracts with Customers"

On January 1, 2017, we adopted Topic 606 using the modified retrospective method applied to those contracts which were not completed as of January 1, 2017. Results for reporting periods beginning after January 1, 2017 are presented under Topic 606, while prior period amounts are not adjusted and continue to be reported in accordance with our historic accounting under Topic 605.

We recorded a net reduction to opening retained earnings of $15 million as of January 1, 2017 due to the cumulative impact of adopting Topic 606, with the impact primarily related to our non-advertising revenues. The impact to revenues as a result of applying Topic 606 was an increase of $10 million and $32 million for the three and nine months ended September 30, 2017, respectively.

Revenue Recognition

Revenues are recognized when control of the promised goods or services is transferred to our customers, in an amount that reflects the consideration we expect to be entitled to in exchange for those goods or services.

The following table presents our revenues disaggregated by revenue source (in millions, unaudited). Sales and usage-based taxes are excluded from revenues.

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2016[(1)]	2017	2016[(1)]	2017
Google properties	$ 16,089	$ 19,723	$ 45,817	$ 55,551
Google Network Members' properties	3,732	4,342	11,167	12,597
Google advertising revenues	19,821	24,065	56,984	68,148
Google other revenues	2,433	3,405	6,677	9,590
Other Bets revenues	197	302	547	794
Total revenues[(2)]	$ 22,451	$ 27,772	$ 64,208	$ 78,532

(1) As noted above, prior period amounts have not been adjusted under the modified retrospective method.
(2) Revenues include hedging gains (losses) of $105 million and $(191) million for the three months ended September 30, 2016 and 2017, respectively, and $352 million and $29 million for the nine months ended September 30, 2016 and 2017, respectively, which do not represent revenues recognized from contracts with customers.

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

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2016	2017	2016	2017
United States	$ 10,649	$ 12,930	$ 30,065	$ 37,021
EMEA[(1)]	7,392	9,097	22,007	25,733
APAC[(1)]	3,248	4,199	8,951	11,548
Other Americas[(1)]	1,162	1,546	3,185	4,230
Total revenues[(2)]	$ 22,451	$ 27,772	$ 64,208	$ 78,532

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

(2) Revenues include hedging gains (losses) for the three and nine months ended September 30, 2016 and 2017.

Advertising Revenues

We generate revenues primarily by delivering advertising on Google properties and Google Network Members' properties.

Google properties revenues consist primarily of advertising revenues generated on Google.com, the Google app, YouTube, and other Google owned and operated properties like Gmail, Google Maps, and Google Play.

Google Network Members' properties revenues consist primarily of advertising revenues generated from placing ads on Google Network Members' properties.

Our customers generally purchase advertising inventory through AdWords, DoubleClick Bid Manager, and DoubleClick AdExchange, among others.

Most of our customers pay us on a cost-per-click basis (CPC), which means that an advertiser pays us only when a user clicks on an ad on Google properties or Google Network Members' properties or views certain YouTube ad formats like TrueView. For these customers, we recognize revenue each time a user clicks on the ad or when a user views the ad for a specified period of time.

We also offer advertising on other bases such as cost-per-impression (CPM), which means an advertiser pays us based on the number of times their ads are displayed on Google properties or Google Network Members' properties. For these customers, we recognize revenue each time an ad is displayed.

Certain customers may receive cash-based incentives or credits, which are accounted for as variable consideration. We estimate these amounts based on the expected amount to be provided to customers and reduce revenues recognized. We believe that there will not be significant changes to our estimates of variable consideration.

For ads placed on Google Network Members' properties, we evaluate whether we are the principal (i.e., report revenues on a gross basis) or agent (i.e., report revenues on a net basis). Generally, we report advertising revenues for ads placed on Google Network Members' properties on a gross basis, that is, the amounts billed to our customers are recorded as revenues, and amounts paid to Google Network Members are recorded as cost of revenues. Where we are the principal, we control the advertising inventory before it is transferred to our customers. Our control is evidenced by our sole ability to monetize the advertising inventory before it is transferred to our customers, and is further supported by us being primarily responsible to our customers and having a level of discretion in establishing pricing.

Other Revenues

Google other revenues and Other Bets revenues consist primarily of revenues from:

- Apps, in-app purchases, and digital content in the Google Play store;
- Google Cloud offerings;
- Hardware; and
- Other miscellaneous products and services.

As it relates to Google other revenues, the most significant judgment is determining whether we are the principal or agent for app sales and in-app purchases through the Google Play store. We report revenues from these transactions on a net basis because our performance obligation is to facilitate a transaction between app developers and end users, for which we earn a commission. Consequently, the portion of the gross amount billed to end users that is remitted to app developers is not reflected as revenues.

Arrangements with Multiple Performance Obligations

Our contracts with customers may include multiple performance obligations. For such arrangements, we allocate revenue to each performance obligation based on its relative standalone selling price. We generally determine standalone selling prices based on the prices charged to customers or using expected cost plus margin.

Deferred Revenues

We record deferred revenues when cash payments are received or due in advance of our performance, including amounts which are refundable. The increase in the deferred revenue balance for the nine months ended September 30, 2017 is primarily driven by cash payments received or due in advance of satisfying our performance obligations, offset by $779 million of revenues recognized that were included in the deferred revenue balance as of December 31, 2016.

Our payment terms vary by the type and location of our customer and the products or services offered. The term between invoicing and when payment is due is not significant. For certain products or services and customer types, we require payment before the products or services are delivered to the customer.

Practical Expedients and Exemptions

We generally expense sales commissions when incurred because the amortization period would have been one year or less. These costs are recorded within sales and marketing expenses.

We do not disclose the value of unsatisfied performance obligations for (i) contracts with an original expected length of one year or less and (ii) contracts for which we recognize revenue at the amount to which we have the right to invoice for services performed.

Note 3. Financial Instruments

We classify our cash equivalents and marketable securities within Level 1 or Level 2 in the fair value hierarchy because we use quoted market prices or alternative pricing sources and models utilizing market observable inputs to determine their fair value. We classify our foreign currency and interest rate derivative contracts primarily within Level 2 in the fair value hierarchy as the valuation inputs are based on quoted prices and market observable data of similar instruments.

Cash, Cash Equivalents, and Marketable Securities

The following tables summarize our cash, cash equivalents, and marketable securities by significant investment categories as of December 31, 2016 and September 30, 2017 (in millions):

	As of December 31, 2016					
	Adjusted Cost	Gross Unrealized Gains	Gross Unrealized Losses	Fair Value	Cash and Cash Equivalents	Marketable Securities
Cash	$ 7,078	$ 0	$ 0	$ 7,078	$ 7,078	$ 0
Level 1:						
Money market and other funds	4,783	0	0	4,783	4,783	0
U.S. government notes	38,454	46	(215)	38,285	613	37,672
Marketable equity securities	160	133	0	293	0	293
	43,397	179	(215)	43,361	5,396	37,965
Level 2:						
Time deposits(1)	142	0	0	142	140	2
Mutual funds(2)	204	7	0	211	0	211
U.S. government agencies	1,826	0	(11)	1,815	300	1,515
Foreign government bonds	2,345	18	(7)	2,356	0	2,356
Municipal securities	4,757	15	(65)	4,707	2	4,705
Corporate debt securities	12,993	114	(116)	12,991	2	12,989
Agency mortgage-backed securities	12,006	26	(216)	11,816	0	11,816
Asset-backed securities	1,855	2	(1)	1,856	0	1,856
	36,128	182	(416)	35,894	444	35,450
Total	$ 86,603	$ 361	$ (631)	$ 86,333	$ 12,918	$ 73,415

	As of September 30, 2017					
	Adjusted Cost	Gross Unrealized Gains	Gross Unrealized Losses	Fair Value	Cash and Cash Equivalents	Marketable Securities
	(unaudited)					
Cash	$ 6,460	$ 0	$ 0	$ 6,460	$ 6,460	$ 0
Level 1:						
Money market and other funds	1,450	0	0	1,450	1,450	0
U.S. government notes	40,268	12	(163)	40,117	919	39,198
Marketable equity securities	226	120	(2)	344	0	344
	41,944	132	(165)	41,911	2,369	39,542
Level 2:						
Time deposits(1)	145	0	0	145	143	2
Mutual funds(2)	233	14	0	247	0	247
U.S. government agencies	2,841	0	(9)	2,832	17	2,815
Foreign government bonds	2,464	8	(15)	2,457	0	2,457
Municipal securities	6,774	17	(10)	6,781	13	6,768
Corporate debt securities	23,107	49	(35)	23,121	1,579	21,542
Agency mortgage-backed securities	10,984	17	(76)	10,925	0	10,925
Asset-backed securities	5,261	7	(4)	5,264	0	5,264
	51,809	112	(149)	51,772	1,752	50,020
Total	$ 100,213	$ 244	$ (314)	$ 100,143	$ 10,581	$ 89,562

(1) The majority of our time deposits are foreign deposits.
(2) The fair value option was elected for mutual funds with gains (losses) recognized in other income (expense), net.

We determine realized gains or losses on the sale of marketable securities on a specific identification method. We recognized gross realized gains of $62 million and $21 million for the three months ended September 30, 2016 and 2017, respectively, and $221 million and $193 million for the nine months ended September 30, 2016 and 2017, respectively. We recognized gross realized losses of $12 million and $65 million for the three months ended September 30, 2016 and 2017, respectively, and $347 million and $274 million for the nine months ended September 30, 2016 and 2017, respectively. We reflect these gains and losses as a component of other income (expense), net, in the accompanying Consolidated Statements of Income.

The following table summarizes the estimated fair value of our investments in marketable debt securities, accounted for as available-for-sale securities and classified by the contractual maturity date of the securities (in millions, unaudited):

	As of September 30, 2017
Due in 1 year	$ 22,234
Due in 1 year through 5 years	52,502
Due in 5 years through 10 years	2,172
Due after 10 years	12,063
Total	$ 88,971

Impairment Considerations for Marketable Investments

The following tables present gross unrealized losses and fair values for those investments that were in an unrealized loss position as of December 31, 2016 and September 30, 2017, 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, 2016					
	Less than 12 Months		12 Months or Greater		Total	
	Fair Value	Unrealized Loss	Fair Value	Unrealized Loss	Fair Value	Unrealized Loss
U.S. government notes	$ 26,411	$ (215)	$ 0	$ 0	$ 26,411	$ (215)
U.S. government agencies	1,014	(11)	0	0	1,014	(11)
Foreign government bonds	956	(7)	0	0	956	(7)
Municipal securities	3,461	(63)	46	(2)	3,507	(65)
Corporate debt securities	6,184	(111)	166	(5)	6,350	(116)
Agency mortgage-backed securities	10,184	(206)	259	(10)	10,443	(216)
Asset-backed securities	391	(1)	0	0	391	(1)
Total	$ 48,601	$ (614)	$ 471	$ (17)	$ 49,072	$ (631)

	As of September 30, 2017					
	Less than 12 Months		12 Months or Greater		Total	
	Fair Value	Unrealized Loss	Fair Value	Unrealized Loss	Fair Value	Unrealized Loss
	(unaudited)					
U.S. government notes	$ 26,626	$ (115)	$ 5,409	$ (48)	$ 32,035	$ (163)
U.S. government agencies	2,751	(9)	0	0	2,751	(9)
Foreign government bonds	1,362	(13)	123	(2)	1,485	(15)
Municipal securities	2,118	(6)	432	(4)	2,550	(10)
Corporate debt securities	11,153	(27)	793	(8)	11,946	(35)
Agency mortgage-backed securities	8,450	(62)	728	(14)	9,178	(76)
Asset-backed securities	2,572	(4)	0	0	2,572	(4)
Marketable equity securities	38	(2)	0	0	38	(2)
Total	$ 55,070	$ (238)	$ 7,485	$ (76)	$ 62,555	$ (314)

During the three months ended September 30, 2016 and the three and nine months ended September 30, 2017, we did not recognize any other-than-temporary impairment losses. During the nine months ended September 30, 2016, we recognized $87 million of other-than-temporary impairment losses related to our marketable equity securities. Those losses are included in gain (loss) on marketable securities, net, as a component of other income (expense), net, in the accompanying Consolidated Statements of Income. See Note 6 for further details on other income (expense), net.

Derivative Financial Instruments

We recognize derivative instruments as either assets or liabilities in the accompanying Consolidated Balance Sheets at fair value. We record changes in the fair value (i.e., gains or losses) of the derivatives in the accompanying Consolidated Statements of Income as either other income (expense), net, or revenues, or in the accompanying Consolidated Balance Sheets in accumulated other comprehensive income (AOCI), as discussed below.

We enter into foreign currency contracts with financial institutions to reduce the risk that our cash flows and earnings will be adversely affected by foreign currency exchange rate fluctuations. We use certain interest rate derivative contracts to hedge interest rate exposures on our fixed income securities and debt issuances. Our program is not used for trading or speculative purposes.

We enter into master netting arrangements, which reduce credit risk by permitting net settlement of transactions with the same counterparty. To further reduce credit risk, we enter into collateral security arrangements under which the counterparty is required to provide collateral when the net fair value of certain financial instruments fluctuates from contractually established thresholds. We can take possession of the collateral in the event of counterparty default. As of December 31, 2016 and September 30, 2017, we received cash collateral related to the derivative instruments under our collateral security arrangements of $362 million and $47 million, respectively.

Cash Flow Hedges

We use foreign currency forwards and option contracts, including collars (an option strategy comprised of a combination of purchased and written options), designated as cash flow hedges to hedge certain forecasted revenue transactions denominated in currencies other than the U.S. dollar and at times we use interest rate swaps to effectively lock interest rates on anticipated debt issuances. These transactions are designated as cash flow hedges. The notional principal of these contracts was approximately $10.7 billion and $11.7 billion as of December 31, 2016 and September 30, 2017, respectively. These contracts have maturities of 24 months or less.

We reflect gain or loss on the effective portion of a cash flow hedge as a component of AOCI and subsequently reclassify cumulative gains and losses to revenues or interest expense when the hedged transactions are recorded. If the hedged transactions become probable of not occurring, the corresponding amounts in AOCI are immediately reclassified to other income (expense), net. For foreign currency collars, we include the change in time value in our assessment of hedge effectiveness. For forwards and all other option contracts, we exclude the change in the forward points and time value from our assessment of hedge effectiveness. We recognize changes of the excluded components in other income (expense), net.

As of September 30, 2017, the effective portion of our cash flow hedges before tax effect was a net accumulated loss of $440 million, of which a net loss of $473 million is expected to be reclassified from AOCI into earnings within the next 12 months.

Fair Value Hedges

We use forward contracts designated as fair value hedges to hedge foreign currency risks for our investments denominated in currencies other than the U.S. dollar. We exclude changes in forward points for the forward contracts from the assessment of hedge effectiveness. The notional principal of these contracts was $2.4 billion and $2.5 billion as of December 31, 2016 and September 30, 2017, respectively.

Gains and losses on these forward contracts are recognized in other income (expense), net, along with the offsetting gains and losses of the related hedged items.

Other Derivatives

Other derivatives not designated as hedging instruments consist of foreign currency forward contracts that we use to hedge intercompany transactions and other monetary assets or liabilities denominated in currencies other than the local currency of a subsidiary. We recognize gains and losses on these contracts, as well as the related costs in other income (expense), net, along with the foreign currency gains and losses on monetary assets and liabilities. The notional principal of the outstanding foreign exchange contracts was $7.9 billion and $17.2 billion as of December 31, 2016 and September 30, 2017, respectively.

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

		As of December 31, 2016		
	Balance Sheet Location	Fair Value of Derivatives Designated as Hedging Instruments	Fair Value of Derivatives Not Designated as Hedging Instruments	Total Fair Value
Derivative Assets:				
Level 2:				
Foreign exchange contracts	Other current and non-current assets	$ 539	$ 57	$ 596
Total		$ 539	$ 57	$ 596
Derivative Liabilities:				
Level 2:				
Foreign exchange contracts	Accrued expenses and other liabilities, current and non-current	$ 4	$ 9	$ 13
Total		$ 4	$ 9	$ 13

		As of September 30, 2017		
	Balance Sheet Location	Fair Value of Derivatives Designated as Hedging Instruments	Fair Value of Derivatives Not Designated as Hedging Instruments	Total Fair Value
		(unaudited)		
Derivative Assets:				
Level 2:				
Foreign exchange contracts	Other current and non-current assets	$ 53	$ 113	$ 166
Total		$ 53	$ 113	$ 166
Derivative Liabilities:				
Level 2:				
Foreign exchange contracts	Accrued expenses and other liabilities, current and non-current	$ 459	$ 123	$ 582
Total		$ 459	$ 123	$ 582

The effect of derivative instruments in cash flow hedging relationships on income and other comprehensive income (OCI) is summarized below (in millions, unaudited):

	Gains (Losses) Recognized in OCI on Derivatives Before Tax Effect (Effective Portion)			
	Three Months Ended September 30,		Nine Months Ended September 30,	
Derivatives in Cash Flow Hedging Relationship	2016	2017	2016	2017
Foreign exchange contracts	$ 52	$ (324)	$ 240	$ (1,011)

Derivatives in Cash Flow Hedging Relationship	Location	Gains (Losses) Reclassified from AOCI into Income (Effective Portion)			
		Three Months Ended September 30,		Nine Months Ended September 30,	
		2016	2017	2016	2017
Foreign exchange contracts	Revenues	$ 105	$ (191)	$ 352	$ 29
Interest rate contracts	Other income (expense), net	1	1	4	4
Total		$ 106	$ (190)	$ 356	$ 33

Derivatives in Cash Flow Hedging Relationship	Location	Gains (Losses) Recognized in Income on Derivatives (Amount Excluded from Effectiveness Testing and Ineffective Portion) (1)			
		Three Months Ended September 30,		Nine Months Ended September 30,	
		2016	2017	2016	2017
Foreign exchange contracts	Other income (expense), net	$ (102)	$ 26	$ (361)	$ 72

(1) Gains (losses) related to the ineffective portion of the hedges were not material in all periods presented.

The effect of derivative instruments in fair value hedging relationships on income is summarized below (in millions, unaudited):

Derivatives in Fair Value Hedging Relationship	Location	Gains (Losses) Recognized in Income on Derivatives(2)			
		Three Months Ended September 30,		Nine Months Ended September 30,	
		2016	2017	2016	2017
Foreign Exchange Hedges:					
Foreign exchange contracts	Other income (expense), net	$ 1	$ (89)	$ 26	$ (216)
Hedged item	Other income (expense), net	1	94	(24)	230
Total		$ 2	$ 5	$ 2	$ 14

(2) Amounts excluded from effectiveness testing and the ineffective portion of the fair value hedging relationships were not material in all periods presented.

The effect of derivative instruments not designated as hedging instruments on income is summarized below (in millions, unaudited):

Derivatives Not Designated As Hedging Instruments	Location	Gains (Losses) Recognized in Income on Derivatives			
		Three Months Ended September 30,		Nine Months Ended September 30,	
		2016	2017	2016	2017
Foreign exchange contracts	Other income (expense), net	$ (67)	$ (39)	$ (147)	$ (263)

Offsetting of Derivatives

We present our forwards and purchased options at gross fair values in the Consolidated Balance Sheets. For foreign currency collars, we present at net fair values where both purchased and written options are with the same counterparty. Our master netting and other similar arrangements allow net settlements under certain conditions. As of December 31, 2016 and September 30, 2017, information related to these offsetting arrangements were as follows (in millions):

Offsetting of Assets

	As of December 31, 2016						
				Gross Amounts Not Offset in the Consolidated Balance Sheets, but Have Legal Rights to Offset			
Description	Gross Amounts of Recognized Assets	Gross Amounts Offset in the Consolidated Balance Sheets	Net Presented in the Consolidated Balance Sheets	Financial Instruments	Cash Collateral Received	Non-Cash Collateral Received	Net Assets Exposed
Derivatives	$ 596	$ 0	$ 596	$ (11) [1]	$ (337)	$ (73)	$ 175

	As of September 30, 2017						
				Gross Amounts Not Offset in the Consolidated Balance Sheets, but Have Legal Rights to Offset			
Description	Gross Amounts of Recognized Assets	Gross Amounts Offset in the Consolidated Balance Sheets	Net Presented in the Consolidated Balance Sheets	Financial Instruments	Cash Collateral Received	Non-Cash Collateral Received	Net Assets Exposed
				(unaudited)			
Derivatives	$ 183	$ (17)	$ 166	$ (122) [1]	$ (37)	$ 0	$ 7

(1) The balances as of December 31, 2016 and September 30, 2017 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, 2016						
				Gross Amounts Not Offset in the Consolidated Balance Sheets, but Have Legal Rights to Offset			
Description	Gross Amounts of Recognized Liabilities	Gross Amounts Offset in the Consolidated Balance Sheets	Net Presented in the Consolidated Balance Sheets	Financial Instruments	Cash Collateral Pledged	Non-Cash Collateral Pledged	Net Liabilities
Derivatives	$ 13	$ 0	$ 13	$ (11) [2]	$ 0	$ 0	$ 2

	As of September 30, 2017						
				Gross Amounts Not Offset in the Consolidated Balance Sheets, but Have Legal Rights to Offset			
Description	Gross Amounts of Recognized Liabilities	Gross Amounts Offset in the Consolidated Balance Sheets	Net Presented in the Consolidated Balance Sheets	Financial Instruments	Cash Collateral Pledged	Non-Cash Collateral Pledged	Net Liabilities
				(unaudited)			
Derivatives	$ 599	$ (17)	$ 582	$ (122) [2]	$ 0	$ 0	$ 460

(2) The balances as of December 31, 2016 and September 30, 2017 were related to derivative assets which are allowed to be net settled against derivative liabilities in accordance with our master netting agreements.

Note 4. Non-Marketable Investments

Our non-marketable investments include non-marketable equity investments and non-marketable debt securities.

Non-Marketable Equity Investments

Our non-marketable equity investments are investments we have made in privately-held companies accounted for under the equity or cost method and are not required to be consolidated under the variable interest or voting models.

As of December 31, 2016 and September 30, 2017, investments accounted for under the equity method had a carrying value of approximately $1.7 billion. Our share of gains and losses in equity method investments including impairment was a net loss of approximately $61 million and $31 million for the three months ended September 30, 2016 and 2017, respectively, and a net loss of $209 million and $93 million for the nine months ended September 30, 2016 and 2017, respectively. As of December 31, 2016 and September 30, 2017, investments accounted for under the cost method had a carrying value of $3.0 billion and $3.6 billion, respectively, and a fair value of approximately $8.1 billion and $8.9 billion, respectively. The fair value of the cost method investments are primarily determined from data leveraging private-market transactions and are classified within Level 3 in the fair value hierarchy. We reflect our share of equity method investee earnings and losses and impairments of non-marketable equity investments as a component of other income (expense), net, in the accompanying Consolidated Statements of Income.

Certain renewable energy investments included in our non-marketable equity investments accounted for under the equity method are variable interest entities (VIE). These entities' 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 impact the VIE's economic performance such as setting operating budgets. Therefore, we do not consolidate these VIEs in our financial statements. The carrying value and maximum exposure of these VIEs were $1.2 billion as of December 31, 2016 and $1.1 billion as of September 30, 2017. The maximum exposure is based on current investments to date. We have determined the single source of our exposure to these VIEs is our capital investment in these entities. We periodically reassess whether we are the primary beneficiary of a VIE. The reassessment process considers whether we have acquired the power to direct the most significant activities of the VIE through changes in governing documents or other circumstances. We also reconsider whether entities previously determined not to be VIEs have become VIEs, and vice versa, based on changes in facts and circumstances including changes in contractual arrangements and capital structure.

Non-Marketable Debt Securities

Our non-marketable debt securities are primarily preferred stock that are redeemable at our option and convertible notes issued by private companies. The cost of these securities were $1.1 billion as of December 31, 2016 and September 30, 2017. These debt securities do not have readily determinable market values and are categorized accordingly as Level 3 in the fair value hierarchy. To estimate the fair value of these securities, we use a combination of valuation methodologies, including market and income approaches based on prior transaction prices; estimated timing, probability, and amount of cash flows; and illiquidity considerations. Financial information of private companies may not be available and consequently we estimate the value based on the best available information at the measurement date. No significant impairments were recognized for the three and nine months ended September 30, 2016 and 2017.

The following table presents a reconciliation for our non-marketable debt securities measured and recorded at fair value on a recurring basis, using significant unobservable inputs (Level 3) (in millions, unaudited):

	Nine Months Ended September 30,	
	2016	2017
Beginning balance	$ 1,024	$ 1,165
Total net gains (losses)		
Included in earnings	0	(5)
Included in other comprehensive income	100	699
Purchases	78	85
Sales	(7)	(1)
Settlements	(16)	(54)
Ending balance	$ 1,179	$ 1,889

Note 5. Debt

Short-Term Debt

We have a debt financing program of up to $5.0 billion through the issuance of commercial paper. Net proceeds from this program are used for general corporate purposes. We had no commercial paper outstanding as of December 31, 2016 and September 30, 2017.

Long-Term Debt

Google issued $3.0 billion of senior unsecured notes in three tranches (collectively, 2011 Notes) in May 2011, due in 2014, 2016, and 2021, as well as $1.0 billion of senior unsecured notes (2014 Notes) in February 2014 due in 2024.

In April 2016, we completed an exchange offer with eligible holders of Google's 2011 Notes due 2021 and 2014 Notes due 2024 (collectively, the Google Notes). An aggregate principal amount of approximately $1.7 billion of the Google Notes was exchanged for approximately $1.7 billion of Alphabet notes with identical interest rate and maturity. Because the exchange was between a parent and the subsidiary company and for substantially identical notes, the change was treated as a debt modification for accounting purposes with no gain or loss recognized.

In August 2016, Alphabet issued $2.0 billion of senior unsecured notes (2016 Notes) due 2026. The net proceeds from the issuance of the 2016 Notes were used for general corporate purposes, including the repayment of outstanding commercial paper. The Alphabet notes due in 2021, 2024, and 2026 rank equally with each other and are structurally subordinate to the outstanding Google Notes.

The total outstanding long-term debt is summarized below (in millions):

	As of December 31, 2016	As of September 30, 2017
		(unaudited)
Long-term debt		
3.625% Notes due on May 19, 2021	$ 1,000	$ 1,000
3.375% Notes due on February 25, 2024	1,000	1,000
1.998% Notes due on August 15, 2026	2,000	2,000
Unamortized discount for the Notes above	(65)	(59)
Subtotal[(1)]	$ 3,935	$ 3,941
Capital lease obligation	0	23
Total long-term debt	$ 3,935	$ 3,964

(1) Includes the outstanding (and unexchanged) Google Notes issued in 2011 and 2014 and the Alphabet notes exchanged in 2016.

The effective interest yields based on proceeds received from the outstanding notes due in 2021, 2024, and 2026 were 3.734%, 3.377%, and 2.231%, respectively, with interest payable semi-annually. We may redeem these notes at any time in whole or in part at specified redemption prices. The total estimated fair value of all outstanding notes was approximately $3.9 billion as of December 31, 2016 and $4.0 billion as of September 30, 2017. 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.

The effective rate of the capital lease obligation approximates the market rate. The estimated fair value of the capital lease obligation approximated its carrying value as of September 30, 2017.

Credit Facility

We have a $4.0 billion revolving credit facility which expires in February 2021. The interest rate for the credit facility is determined based on a formula using certain market rates. No amounts were outstanding under the credit facility as of December 31, 2016 and September 30, 2017.

Note 6. Supplemental Financial Statement Information

Property and Equipment, Net

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

	As of December 31, 2016	As of September 30, 2017
		(unaudited)
Land and buildings	$ 19,804	$ 22,367
Information technology assets	16,084	19,454
Construction in progress	8,166	10,280
Leasehold improvements	3,415	4,208
Furniture and fixtures	58	49
Property and equipment, gross	47,527	56,358
Less: accumulated depreciation and amortization	(13,293)	(16,238)
Property and equipment, net	$ 34,234	$ 40,120

As of September 30, 2017, assets under capital lease with a cost basis of $364 million were included in property and equipment.

Note Receivable

In connection with the sale of our Motorola Mobile business to Lenovo Group Limited (Lenovo) on October 29, 2014, we received an interest-free, three-year prepayable promissory note (Note Receivable) due October 2017. The Note Receivable was included on our Consolidated Balance Sheets in other current assets. Based on the general market conditions and the credit quality of Lenovo at the time of the sale, we discounted the Note Receivable at an effective interest rate of 4.5%. The Note Receivable was fully repaid in May 2017. The outstanding balances are shown in the table below (in millions):

	As of December 31, 2016	As of September 30, 2017
		(unaudited)
Principal of the Note Receivable	$ 1,448	$ 0
Less: unamortized discount for the Note Receivable	(51)	0
Total	$ 1,397	$ 0

As of December 31, 2016, we did not recognize a valuation allowance on the Note Receivable.

Accrued expenses and other current liabilities

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

	As of December 31, 2016	As of September 30, 2017
		(unaudited)
European Commission fine(1)	$ 0	$ 2,844
Accrued customer liabilities	1,256	1,262
Other accrued expenses and current liabilities	4,888	5,201
Accrued expenses and other current liabilities	$ 6,144	$ 9,307

(1) Includes the effects of foreign exchange.

Accumulated Other Comprehensive Income (Loss)

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

	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, 2015	$ (2,047)	$ (86)	$ 259	$ (1,874)
Other comprehensive income (loss) before reclassifications	166	627	148	941
Amounts reclassified from AOCI	0	137	(236)	(99)
Other comprehensive income (loss)	166	764	(88)	842
Balance as of September 30, 2016	$ (1,881)	$ 678	$ 171	$ (1,032)

	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, 2016	$ (2,646)	$ (179)	$ 423	$ (2,402)
Other comprehensive income (loss) before reclassifications	1,457	803	(668)	1,592
Amounts reclassified from AOCI	0	98	(34)	64
Other comprehensive income (loss)	1,457	901	(702)	1,656
Balance as of September 30, 2017	$ (1,189)	$ 722	$ (279)	$ (746)

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

		Gains (Losses) Reclassified from AOCI to the Consolidated Statement of Income			
		Three Months Ended September 30,		Nine Months Ended September 30,	
AOCI Components	Location	2016	2017	2016	2017
Unrealized gains (losses) on available-for-sale investments					
	Other income (expense), net	$ 46	$ (47)	$ (137)	$ (98)
	Provision for income taxes	0	0	0	0
	Net of tax	$ 46	$ (47)	$ (137)	$ (98)
Unrealized gains (losses) on cash flow hedges					
Foreign exchange contracts	Revenue	$ 105	$ (191)	$ 352	$ 29
Interest rate contracts	Other income (expense), net	1	1	4	4
	Benefit (provision) for income taxes	(39)	65	(120)	1
	Net of tax	$ 67	$ (125)	$ 236	$ 34
Total amount reclassified, net of tax		$ 113	$ (172)	$ 99	$ (64)

Other Income (Expense), Net

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

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2016	2017	2016	2017
Interest income	$ 318	$ 306	$ 895	$ 912
Interest expense	(29)	(27)	(91)	(73)
Foreign currency exchange losses, net	(123)	(53)	(437)	(101)
Gain (loss) on marketable securities, net	50	(44)	(126)	(81)
Gain (loss) on non-marketable investments, net	40	(32)	(78)	(79)
Other	22	47	53	115
Other income (expense), net	$ 278	$ 197	$ 216	$ 693

Interest expense in the preceding table is net of interest capitalized of $0 million and $13 million for the three months ended September 30, 2016 and 2017, respectively, and $0 million and $32 million for the nine months ended September 30, 2016 and 2017, respectively.

Note 7. Acquisitions

During the nine months ended September 30, 2017, we completed various acquisitions and purchases of intangible assets for total consideration of approximately $312 million. In aggregate, $12 million was cash acquired, $111 million was attributed to intangible assets, $205 million was attributed to goodwill, and $16 million was attributed to net liabilities assumed. These acquisitions generally enhance the breadth and depth of our offerings and expand our expertise in engineering and other functional areas. The amount of goodwill expected to be deductible for tax purposes is approximately $24 million.

Pro forma results of operations for these acquisitions have not been presented because they are not material to the consolidated results of operations, either individually or in aggregate.

For all intangible assets acquired and purchased during the nine months ended September 30, 2017, patents and developed technology have a weighted-average useful life of 3.9 years, customer relationships have a weighted-average useful life of 3.1 years, and trade names and other have a weighted-average useful life of 8.8 years.

Note 8. Calico

In September 2013, we announced the formation of Calico, a life science company with a mission to harness advanced technologies to increase our understanding of the biology that controls lifespan. As of September 30, 2017, we have contributed $240 million to Calico in exchange for Calico convertible preferred units and are committed to fund an additional $490 million on an as-needed basis.

Calico is a VIE and its results of operations and statement of financial position are included in our consolidated financial statements as we have the power to direct the activities that most significantly impact its economic performance.

In September 2014, AbbVie Inc. (AbbVie) and Calico announced a research and development collaboration agreement intended to help both companies discover, develop, and bring to market new therapies for patients with age-related diseases, including neurodegeneration and cancer. As of September 30, 2017, AbbVie has contributed $750 million to fund the collaboration pursuant to the agreement, which reflects its total commitment. As of September 30, 2017, Calico has contributed $250 million and committed up to an additional $500 million.

Calico has used its scientific expertise to establish a world-class research and development facility, with a focus on drug discovery and early drug development; and AbbVie provides scientific and clinical development support and its commercial expertise to bring new discoveries to market. Both companies share costs and profits equally. AbbVie's contribution has been recorded as a liability on Calico's financial statements, which is reduced and reflected as a reduction to research and development expense as eligible research and development costs are incurred by Calico over the next few years.

Note 9. Verily

Verily is a life science company with a mission to make the world's health data useful so that people enjoy healthier lives. Verily is a VIE and its results of operations and statement of financial position are included in our consolidated financial statements as we have the power to direct the activities that most significantly impact its economic performance.

In January 2017, Temasek, a Singapore-based investment company, signed a binding commitment to purchase a noncontrolling interest in Verily for an aggregate of $800 million in cash. In the first quarter of 2017, the first tranche of the investment closed and we received $480 million. The second and final tranche of the investment closed in the third quarter of 2017 and we received the remaining $320 million. The transaction is accounted for as an equity transaction and no gain or loss was recognized. Of the $800 million received, $78 million was recorded as noncontrolling interest and $722 million was recorded as additional paid-in capital. Noncontrolling interest and net loss attributable to noncontrolling interest were not separately presented on our consolidated financial statements as of and for the three and nine months ended September 30, 2017 as the amounts were not material.

Note 10. Goodwill and Other Intangible Assets

Goodwill

The changes in the carrying amount of goodwill allocated to our disclosed segments for the nine months ended September 30, 2017 were as follows (in millions, unaudited):

	Google	Other Bets	Total Consolidated
Balance as of December 31, 2016	$ 16,027	$ 441	$ 16,468
Acquisitions	196	9	205
Foreign currency translation and other adjustments	57	1	58
Balance as of September 30, 2017	$ 16,280	$ 451	$ 16,731

Other Intangible Assets

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

	As of December 31, 2016		
	Gross Carrying Amount	Accumulated Amortization	Net Carrying Amount
Patents and developed technology	$ 5,542	$ 2,710	$ 2,832
Customer relationships	352	197	155
Trade names and other	463	143	320
Total	$ 6,357	$ 3,050	$ 3,307

	As of September 30, 2017		
	Gross Carrying Amount	Accumulated Amortization	Net Carrying Amount
		(unaudited)	
Patents and developed technology	$ 5,312	$ 2,931	$ 2,381
Customer relationships	358	246	112
Trade names and other	548	158	390
Total	$ 6,218	$ 3,335	$ 2,883

Amortization expense relating to purchased intangible assets was $203 million and $194 million for the three months ended September 30, 2016 and 2017, respectively, and $629 million and $600 million for the nine months ended September 30, 2016 and 2017, respectively.

As of September 30, 2017, expected amortization expense relating to purchased intangible assets for each of the next five years and thereafter are as follows (in millions, unaudited):

Remainder of 2017	$ 193
2018	726
2019	615
2020	493
2021	459
Thereafter	397
	$ 2,883

Note 11. Contingencies

Legal Matters

Antitrust Investigations

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

On April 15, 2015, the EC issued a Statement of Objections (SO) regarding the display and ranking of shopping search results and ads, to which we responded on August 27, 2015. On July 14, 2016, the EC issued a Supplementary SO regarding shopping search results and ads. 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 €2.42 billion (approximately $2.74 billion as of June 27, 2017) fine. On September 11, 2017, we appealed the EC decision and on September 27, 2017, we implemented product changes to bring shopping ads into compliance with the EC's decision. We recognized a charge of approximately $2.74 billion for the fine in the second quarter of 2017. The fine is included in accrued expenses and other current liabilities on our Consolidated Balance Sheet as we provided bank guarantees in lieu of a cash payment for the fine.

On April 20, 2016, the EC issued an SO regarding certain Android distribution practices. On July 14, 2016, the EC issued an SO regarding the syndication of AdSense for Search. We responded to the SOs and continue to respond to the EC's informational requests. There is significant uncertainty as to the outcomes of these investigations; however, adverse decisions could result in fines and directives to alter or terminate certain conduct. Given the nature of these cases, we are unable to estimate the reasonably possible loss or ranges of loss, if any. We remain committed to working with the EC to resolve these matters.

The Comision Nacional de Defensa de la Competencia in Argentina, the Competition Commission of India (CCI), Brazil's Council for Economic Defense (CADE), and the Korean Fair Trade Commission have also opened investigations into certain of our business practices. In November 2016, we responded to the CCI Director General's report with interim findings of competition law infringements regarding search and ads.

Patent and Intellectual Property Claims

We have had patent, copyright, and trademark infringement lawsuits filed against us claiming that certain of our products, services, and technologies infringe the intellectual property rights of others. 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, and may also cause us to change our business practices, and require development of 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 for a company or its suppliers in an ITC action could 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 for certain intellectual property infringement claims against them, 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. 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 impact our business.

Oracle America, Inc. (Oracle) brought a copyright lawsuit against Google in the Northern District of California, alleging that Google's Android infringes Oracle's copyrights related to certain Java application programming interfaces. After trial, final judgment was entered by the district court in favor of Google on June 8, 2016, and the court decided post-trial motions in favor of Google. Oracle has appealed. We believe this lawsuit is without merit and are defending ourselves vigorously. Given the nature of this case, we are unable to estimate the reasonably possible loss or range of loss, if any, arising from this matter.

Other

We are also regularly subject to claims, suits, regulatory and government investigations, and other proceedings involving competition (such as the pending EC investigations described above), intellectual property, privacy, tax, labor and employment, commercial disputes, content generated by our users, goods and services offered by advertisers or publishers using our platforms, personal injury, consumer protection, and other matters. Such claims, suits, regulatory and government investigations, and other proceedings could result in fines, civil or criminal penalties, or other adverse consequences.

Certain of our outstanding legal matters include speculative claims for substantial or indeterminate amounts of damages. 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, on a monthly basis, developments in our legal matters that could affect the amount of liability that has been previously accrued, and the matters and related reasonably possible losses disclosed, and make adjustments as appropriate. Significant judgment is required to determine both likelihood of there being and the estimated amount of a loss related to such matters.

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

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

Indirect Taxes and Other Non-Income Taxes

We are under audit by various domestic and foreign tax authorities with regards to indirect tax and other non-income tax matters. The subject matter of indirect tax and other 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 indirect taxes and other 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. We believe these matters are without merit and we are defending ourselves vigorously. 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 14.

Note 12. Net Income Per Share

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

	Three Months Ended September 30,					
	2016			2017		
	Class A	Class B	Class C	Class A	Class B	Class C
Basic net income per share:						
Numerator						
Allocation of undistributed earnings	$ 2,171	$ 357	$ 2,533	$ 2,891	$ 457	$ 3,384
Denominator						
Number of shares used in per share computation	294,945	48,513	344,103	297,804	47,078	348,603
Basic net income per share	$ 7.36	$ 7.36	$ 7.36	$ 9.71	$ 9.71	$ 9.71
Diluted net income per share:						
Numerator						
Allocation of undistributed earnings for basic computation	$ 2,171	$ 357	$ 2,533	$ 2,891	$ 457	$ 3,384
Reallocation of undistributed earnings as a result of conversion of Class B to Class A shares	357	0	0	457	0	0
Reallocation of undistributed earnings	(25)	(5)	25	(38)	(7)	38
Allocation of undistributed earnings	$ 2,503	$ 352	$ 2,558	$ 3,310	$ 450	$ 3,422
Denominator						
Number of shares used in basic computation	294,945	48,513	344,103	297,804	47,078	348,603
Weighted-average effect of dilutive securities						
Add:						
Conversion of Class B to Class A common shares outstanding	48,513	0	0	47,078	0	0
Restricted stock units and other contingently issuable shares	1,923	0	8,956	1,070	0	9,161
Number of shares used in per share computation	345,381	48,513	353,059	345,952	47,078	357,764
Diluted net income per share	$ 7.25	$ 7.25	$ 7.25	$ 9.57	$ 9.57	$ 9.57

	Nine Months Ended September 30,					
	2016			2017		
	Class A	Class B	Class C	Class A	Class B	Class C
Basic net income per share:						
Numerator						
Allocation of undistributed earnings	$ 6,047	$ 1,013	$ 7,085	$ 6,734	$ 1,069	$ 7,879
Denominator						
Number of shares used in per share computation	293,723	49,214	344,162	297,291	47,189	347,853
Basic net income per share	$ 20.59	$ 20.59	$ 20.59	$ 22.65	$ 22.65	$ 22.65
Diluted net income per share:						
Numerator						
Allocation of undistributed earnings for basic computation	$ 6,047	$ 1,013	$ 7,085	$ 6,734	$ 1,069	$ 7,879
Reallocation of undistributed earnings as a result of conversion of Class B to Class A shares	1,013	0	0	1,069	0	0
Reallocation of undistributed earnings	(68)	(16)	68	(92)	(17)	92
Allocation of undistributed earnings	$ 6,992	$ 997	$ 7,153	$ 7,711	$ 1,052	$ 7,971
Denominator						
Number of shares used in basic computation	293,723	49,214	344,162	297,291	47,189	347,853
Weighted-average effect of dilutive securities						
Add:						
Conversion of Class B to Class A common shares outstanding	49,214	0	0	47,189	0	0
Restricted stock units and other contingently issuable shares	2,204	0	8,896	1,255	0	9,497
Number of shares used in per share computation	345,141	49,214	353,058	345,735	47,189	357,350
Diluted net income per share	$ 20.26	$ 20.26	$ 20.26	$ 22.30	$ 22.30	$ 22.30

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

Note 13. Stockholders' Equity

Stock-Based Compensation

For the three months ended September 30, 2016 and 2017, total stock-based compensation expense was $1,902 million and $1,881 million, including amounts associated with awards we expect to settle in Alphabet stock of $1,860 million and $1,820 million, respectively. For the nine months ended September 30, 2016 and 2017, total stock-based compensation expense was $4,912 million and $6,008 million, including amounts associated with awards we expect to settle in Alphabet stock of $4,857 million and $5,832 million, respectively.

Stock-Based Award Activities

The following table summarizes the activities for our unvested restricted stock units (RSUs) for the nine months ended September 30, 2017 (unaudited):

	Unvested Restricted Stock Units	
	Number of Shares	Weighted-Average Grant-Date Fair Value
Unvested as of December 31, 2016	25,348,955	$ 624.92
Granted	7,246,476	$ 826.60
Vested	(9,112,936)	$ 610.82
Forfeited/canceled	(1,029,398)	$ 651.68
Unvested as of September 30, 2017	22,453,097	$ 694.86

As of September 30, 2017, there was $14.0 billion of unrecognized compensation cost related to unvested employee RSUs. This amount is expected to be recognized over a weighted-average period of 2.5 years.

Share Repurchases

In October 2016, the board of directors of Alphabet authorized the company to repurchase up to $7,019,340,976.83 of its Class C capital stock. The repurchases are being executed from time to time, subject to general business and market conditions and other investment opportunities, through open market purchases or privately negotiated transactions, including through Rule 10b5-1 plans. The repurchase program does not have an expiration date. In the nine months ended September 30, 2017, we repurchased and subsequently retired 3.1 million shares of Alphabet Class C capital stock for an aggregate amount of $2.7 billion.

Note 14. Income Taxes

We are subject to income taxes in the U.S. and numerous foreign jurisdictions. Significant judgment is required in evaluating our uncertain tax positions and determining our provision for income taxes. Our total gross unrecognized tax benefits were $5.4 billion and $5.1 billion as of December 31, 2016 and September 30, 2017, respectively. Our total unrecognized tax benefits that, if recognized, would affect our effective tax rate were $4.3 billion and $3.9 billion as of December 31, 2016 and September 30, 2017, respectively.

Our effective tax rate is lower than the U.S. statutory rate primarily because of more earnings realized in countries that have lower statutory tax rates. Our effective tax rate in the future will depend on the portion of our profits earned within and outside the United States.

In addition, we are subject to the continuous examination of our income tax returns by the Internal Revenue Service (IRS) and other domestic and foreign tax authorities. We regularly assess the likelihood of adverse outcomes resulting from these examinations to determine the adequacy of our provision for income taxes. We continue to monitor the progress of ongoing discussions with tax authorities and the impact, if any, of the expected expiration of the statute of limitations in various taxing jurisdictions. We believe that an adequate provision has been made for any adjustments that may result from tax examinations. However, the outcome of tax audits cannot be predicted with certainty. If any issues addressed in our tax audits are resolved in a manner not consistent with management's expectations, we could be required to adjust the provision for income taxes in the period such resolution occurs.

We have received tax assessments in multiple foreign jurisdictions asserting transfer pricing adjustments or permanent establishment. We continue to defend against any and all such claims as presented. While we believe it is more likely than not that our tax position will be sustained, it is reasonably possible that we will have future obligations related to these matters.

For information regarding indirect taxes and other non-income taxes, see Note 11.

Note 15. Information about Segments and Geographic Areas

We operate our business in multiple operating segments. Google is our only reportable segment. None of our other segments meet the quantitative thresholds to qualify as reportable segments; therefore, the other operating segments are combined and disclosed below as Other Bets.

Our reported segments are described below:

- Google – Google includes our main internet products such as Search, Ads, Commerce, Maps, YouTube, Google Cloud, Android, Chrome, and Google Play as well as our hardware initiatives. Our technical infrastructure and some newer efforts like virtual reality are also included in Google. Google generates revenues primarily from advertising; sales of apps, in-app purchases, and digital content; services fees for cloud offerings; and sales of hardware products.
- Other Bets – Other Bets is a combination of multiple operating segments that are not individually material. Other Bets includes businesses such as Access, Calico, CapitalG, GV, Nest, Verily, Waymo, and X. Revenues from the Other Bets are derived primarily through the sales of internet and TV services through Google Fiber, sales of Nest products and services, and licensing and R&D services through Verily.

Revenues, cost of revenues, and operating expenses are generally directly attributed to our segments. Inter-segment revenues are not presented separately, as these amounts are immaterial. Our Chief Operating Decision Maker does not evaluate operating segments using asset information. Prior period segment information has been recast to conform to the current period segment presentation.

Information about segments during the periods presented were as follows (in millions, unaudited):

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2016	2017	2016	2017
Revenues:				
Google	$ 22,254	$ 27,470	$ 63,661	$ 77,738
Other Bets	197	302	547	794
Total revenues	$ 22,451	$ 27,772	$ 64,208	$ 78,532

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2016	2017	2016	2017
Operating income (loss):				
Google	$ 6,774	$ 8,744	$ 20,009	$ 24,145
Other Bets	(861)	(812)	(2,490)	(2,439)
Reconciling items(1)	(146)	(150)	(442)	(3,224)
Total income from operations	$ 5,767	$ 7,782	$ 17,077	$ 18,482

(1) Reconciling items are primarily comprised of the European Commission fine for the nine months ended September 30, 2017, as well as corporate administrative costs and other miscellaneous items that are not allocated to individual segments for all periods presented.

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2016	2017	2016	2017
Capital expenditures:				
Google	$ 2,434	$ 3,559	$ 6,529	$ 8,800
Other Bets	324	77	881	398
Reconciling items(2)	(204)	(98)	(276)	(321)
Total capital expenditures as presented on the Consolidated Statements of Cash Flows	$ 2,554	$ 3,538	$ 7,134	$ 8,877

(2) Reconciling items are related to timing differences of payments as segment capital expenditures are on accrual basis while total capital expenditures shown on the Consolidated Statements of Cash Flow are on cash basis and other miscellaneous differences.

Stock-based compensation (SBC) and depreciation, amortization, and impairment are included in segment operating income (loss) as shown below (in millions, unaudited):

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2016	2017	2016	2017
Stock-based compensation:				
Google	$ 1,629	$ 1,654	$ 4,273	$ 5,362
Other Bets	199	130	486	355
Reconciling items(3)	32	36	98	115
Total stock-based compensation(4)	$ 1,860	$ 1,820	$ 4,857	$ 5,832
Depreciation, amortization, and impairment:				
Google	$ 1,488	$ 1,667	$ 4,214	$ 4,606
Other Bets	104	94	239	283
Reconciling items(5)	4	0	4	0
Total depreciation, amortization, and impairment as presented on the Consolidated Statements of Cash Flows	$ 1,596	$ 1,761	$ 4,457	$ 4,889

(3) Reconciling items represent corporate administrative costs that are not allocated to individual segments.
(4) For purposes of segment reporting, SBC represents awards that we expect to settle in Alphabet stock.
(5) Reconciling items are primarily related to corporate administrative costs and other miscellaneous items that are not allocated to individual segments.

The following table presents our long-lived assets by geographic area (in millions):

	As of December 31, 2016	As of September 30, 2017
		(unaudited)
Long-lived assets:		
United States	$ 47,383	$ 53,051
International	14,706	17,140
Total long-lived assets	$ 62,089	$ 70,191

For revenues by geography, see Note 2.

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

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

Executive Overview of Results

Below are our key financial results for the three months ended September 30, 2017 (consolidated unless otherwise noted):

- Revenues of $27.8 billion and revenue growth of 24% year over year, constant currency revenue growth of 24% year over year.
- Google segment revenues of $27.5 billion with revenue growth of 23% year over year and Other Bets revenues of $0.3 billion with revenue growth of 53% year over year.
- Revenues from the United States, EMEA, APAC, and Other Americas were $12.9 billion, $9.1 billion, $4.2 billion, and $1.5 billion, respectively.
- Cost of revenues was $11.1 billion, consisting of traffic acquisition costs of $5.5 billion and other cost of revenues of $5.6 billion. Our traffic acquisition costs as a percentage of advertising revenues was 23%.
- Operating expenses (excluding cost of revenues) were $8.8 billion.
- Income from operations was $7.8 billion.
- Effective tax rate was 16%.
- Net income was $6.7 billion with diluted net income per share of $9.57.
- Operating cash flow was $9.9 billion.
- Capital expenditures were $3.5 billion.
- Headcount increased to 78,101 as of September 30, 2017.

Information about Segments

We operate our business in multiple operating segments. Google is our only reportable segment. None of our other segments meet the quantitative thresholds to qualify as reportable segments; therefore, the other operating segments are combined and disclosed below as Other Bets.

Our reported segments are described below:

- Google – Google includes our main internet products such as Search, Ads, Commerce, Maps, YouTube, Google Cloud, Android, Chrome, and Google Play as well as our hardware initiatives. Our technical infrastructure and some newer efforts like virtual reality are also included in Google. Google generates revenues primarily from advertising; sales of apps, in-app purchases, and digital content; services fees for cloud offerings; and sales of hardware products.
- Other Bets – Other Bets is a combination of multiple operating segments that are not individually material. Other Bets includes businesses such as Access, Calico, CapitalG, GV, Nest, Verily, Waymo, and X. Revenues from the Other Bets are derived primarily through the sales of internet and TV services through Google Fiber, sales of Nest products and services, and licensing and R&D services through Verily.

See Note 15 of the Notes to Consolidated Financial Statements included in Part I, Item 1 of this Quarterly Report on Form 10-Q for further information. Prior period segment information has been recast to conform to the current period segment presentation.

Revenues

The following table presents our revenues, by segment and revenue source (in millions, unaudited):

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2016	2017	2016	2017
Google segment				
Google properties revenues	$ 16,089	$ 19,723	$ 45,817	$ 55,551
Google Network Members' properties revenues	3,732	4,342	11,167	12,597
Google advertising revenues	19,821	24,065	56,984	68,148
Google other revenues	2,433	3,405	6,677	9,590
Google segment revenues	22,254	27,470	63,661	77,738
Other Bets				
Other Bets revenues	197	302	547	794
Revenues	$ 22,451	$ 27,772	$ 64,208	$ 78,532

Google segment

The following table presents our Google segment revenues (in millions, unaudited), and changes in our aggregate paid clicks and cost-per-click (expressed as a percentage):

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2016	2017	2016	2017
Google segment revenues	$ 22,254	$ 27,470	$ 63,661	$ 77,738
Google segment revenues as a percentage of total revenues	99.1%	98.9 %	99.1%	99.0 %
Aggregate paid clicks change		47 %		48 %
Aggregate cost-per-click change		(18)%		(20)%

Use of Monetization Metrics

When assessing our advertising revenue performance, we present information regarding the percentage change in the number of "paid clicks" and "cost-per-click" for our Google properties and Google Network Members' properties. Management views these as important metrics for understanding our business.

Paid clicks for our Google properties represent engagement by users and include clicks on advertisements by end-users related to searches on Google.com, clicks related to advertisements on other owned and operated properties including Gmail, Maps, and Google Play; and viewed YouTube engagement ads like TrueView (counted as an engagement when the user chooses not to skip the ad). Paid clicks for our Google Network Members' properties include clicks by end-users related to advertisements served on Google Network Members' properties participating in AdSense for Search, AdSense for Content, and AdMob. In some cases, such as programmatic and reservation based advertising buying, we primarily charge advertisers by impression; while growing, this represents a small part of our revenue base.

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.

We periodically review, refine and update our methodologies for monitoring, gathering, and counting the number of paid clicks and for identifying the revenues generated by click activity.

In the first quarter of 2017, we refined our methodology for paid clicks and cost-per-click to include additional categories of TrueView engagement ads and exclude non-engagement based trial ad formats. This change resulted in a modest increase in paid clicks and a modest decrease in cost-per-click. For comparison purposes, we have included updated data for historical periods in the table below:

	Three Months Ended			
	Mar 31, 2016	Jun 30, 2016	Sep 30, 2016	Dec 31, 2016
Year-over-year change				
Aggregate paid clicks	29 %	28 %	32 %	39 %
Paid clicks on Google properties	38 %	36 %	41 %	47 %
Paid clicks on Google Network Members' properties	2 %	0 %	1 %	7 %
Aggregate cost-per-click	(8)%	(6)%	(10)%	(17)%
Cost-per-click on Google properties	(11)%	(8)%	(12)%	(18)%
Cost-per-click on Google Network Members' properties	(8)%	(8)%	(14)%	(19)%
Quarter-over-quarter change				
Aggregate paid clicks	(2)%	7 %	9 %	22 %
Paid clicks on Google properties	(3)%	9 %	11 %	25 %
Paid clicks on Google Network Members' properties	4 %	(3)%	1 %	6 %
Aggregate cost-per-click	(1)%	(1)%	(5)%	(10)%
Cost-per-click on Google properties	1 %	(2)%	(6)%	(12)%
Cost-per-click on Google Network Members' properties	(12)%	(2)%	(6)%	0 %

Our advertising revenue growth and the change in advertising revenue growth, as well as the change in paid clicks and cost-per-click on Google properties and Google Network Members' properties and the correlation between these items, have fluctuated and may continue to fluctuate because of various factors, including:

- growth rates of revenues from Google properties, including YouTube, compared to growth rates of revenues from Google Network Members' properties;
- advertiser competition for keywords;
- changes in foreign currency exchange rates;
- seasonality;
- the fees advertisers are willing to pay based on how they manage their advertising costs;
- changes in advertising quality or formats;
- changes in device mix;
- traffic growth in emerging markets compared to more mature markets and across various advertising verticals and channels;
- a shift in the proportion of non-click based revenues generated on Google properties and Google Network Members' properties, including an increase in programmatic and reservation based advertising buying; and
- general economic conditions.

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

Google properties

The following table presents our Google properties revenues (in millions, unaudited), and changes in our paid clicks and cost-per-click (expressed as a percentage):

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2016	2017	2016	2017
Google properties revenues	$ 16,089	$ 19,723	$ 45,817	$ 55,551
Google properties revenues as a percentage of Google segment revenues	72.3%	71.8 %	72.0%	71.5 %
Paid clicks change		55 %		57 %
Cost-per-click change		(21)%		(22)%

Google properties revenues consist primarily of advertising revenues that are generated on:

- Google search properties which includes revenues from traffic generated by search distribution partners who use Google.com as their default search in browsers, toolbars, etc.;
- Other Google owned and operated properties like Gmail, Google Maps, and Google Play; and
- YouTube, including but not limited to, YouTube TrueView and Google Preferred.

Our Google properties revenues increased $3,634 million from the three months ended September 30, 2016 to the three months ended September 30, 2017. The growth was primarily driven by increases in mobile search resulting from ongoing growth in user adoption and usage, as well as continued growth in advertiser activity. We also experienced growth in desktop search due to improvements in ad formats and delivery, as well as growth in YouTube driven primarily by video advertising.

Our Google properties revenues increased $9,734 million from the nine months ended September 30, 2016 to the nine months ended September 30, 2017. The growth was primarily driven by increases in mobile search resulting from ongoing growth in user adoption and usage, as well as continued growth in advertiser activity. We also experienced growth in YouTube driven primarily by video advertising. The growth was partially offset by the general strengthening of the U.S. dollar compared to certain foreign currencies.

The number of paid clicks through our advertising programs on Google properties increased from the three and nine months ended September 30, 2016 to the three and nine months ended September 30, 2017 due to growth in YouTube engagement ads, increases in mobile search queries, improvements we have made in ad formats and delivery, and continued global expansion of our products, advertisers and user base. The positive impact on our revenues from an increase in paid clicks was partially offset by a decrease in the cost-per-click paid by our advertisers from the three and nine months ended September 30, 2016 to the three and nine months ended September 30, 2017. The decrease in cost-per-click was primarily driven by continued growth in YouTube engagement ads where cost-per-click remains lower than on our other advertising platforms. The decrease in cost-per-click was also impacted by changes in device mix, property mix, product mix, geographic mix, ongoing product changes, and fluctuations of the U.S. dollar compared to certain foreign currencies.

Google Network Members' properties

The following table presents our Google Network Members' properties revenues (in millions, unaudited) and changes in our paid clicks and cost-per-click (expressed as a percentage):

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2016	2017	2016	2017
Google Network Members' properties revenues	$ 3,732	$ 4,342	$ 11,167	$ 12,597
Google Network Members' properties revenues as a percentage of Google segment revenues	16.8%	15.8 %	17.5%	16.2 %
Paid clicks change		10 %		9 %
Cost-per-click change		(5)%		(11)%

Google Network Members' properties revenues consist primarily of advertising revenues generated from ads placed on Google Network Member properties through:

- AdMob;
- AdSense (such as AdSense for Search, AdSense for Content, etc.); and
- DoubleClick AdExchange.

Our Google Network Members' properties revenues increased $610 million from the three months ended September 30, 2016 to the three months ended September 30, 2017. The growth was primarily driven by strength in both programmatic advertising buying and AdMob.

Our Google Network Members' properties revenues increased $1,430 million from the nine months ended September 30, 2016 to the nine months ended September 30, 2017. The growth was primarily driven by strength in both programmatic advertising buying and AdMob, offset by a decline in our traditional AdSense businesses and the general strengthening of the U.S. dollar compared to certain foreign currencies.

The increase in paid clicks from the three and nine months ended September 30, 2016 to the three and nine months ended September 30, 2017 resulted primarily from growth in AdMob and an increase from our traditional AdSense for Search business. The positive impact on our revenues from an increase in paid clicks was partially offset by a decrease in the cost-per-click paid by our advertisers. The decrease in cost-per-click was impacted by changes in device mix, property mix, product mix, geographic mix, ongoing product changes, and fluctuations of the U.S. dollar compared to certain foreign currencies.

Google other revenues

The following table presents our Google other revenues (in millions, unaudited):

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2016	2017	2016	2017
Google other revenues	$ 2,433	$ 3,405	$ 6,677	$ 9,590
Google other revenues as a percentage of Google segment revenues	10.9%	12.4%	10.5%	12.3%

Google other revenues consist primarily of revenues from:

- Apps, in-app purchases, and digital content in the Google Play store;
- Google Cloud offerings; and
- Hardware.

Our Google other revenues increased $972 million from the three months ended September 30, 2016 to the three months ended September 30, 2017 and increased $2,913 million from the nine months ended September 30, 2016 to the nine months ended September 30, 2017. The growth from the three and nine months ended September 30, 2016 to the three and nine months ended September 30, 2017 was primarily driven by revenues from Google Cloud offerings, revenues from Google Play, largely relating to in-app purchases (revenues which we recognize net of payout to developers), and hardware sales.

Other Bets

The following table presents our Other Bets revenues (in millions, unaudited):

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2016	2017	2016	2017
Other Bets revenues	$ 197	$ 302	$ 547	$ 794
Other Bets revenues as a percentage of total revenues	0.9%	1.1%	0.9%	1.0%

Other Bets revenues consist primarily of revenues and sales from:

- Internet and TV services;
- Licensing and R&D services; and
- Nest branded hardware.

Our Other Bets revenues increased $105 million from the three months ended September 30, 2016 to the three months ended September 30, 2017 and increased $247 million from the nine months ended September 30, 2016 to the nine months ended September 30, 2017. The growth from the three and nine months ended September 30, 2016 to the three and nine months ended September 30, 2017 was primarily driven by revenues from sales of Nest branded hardware, Fiber internet and TV services, and Verily licensing and R&D services.

Revenues by Geography

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

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2016	2017	2016	2017
United States	47%	47%	47%	47%
EMEA	33%	33%	34%	33%
APAC	15%	15%	14%	15%
Other Americas	5%	5%	5%	5%

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

Use of Constant Currency Revenues and Constant Currency Revenue Growth

The impact of currency exchange rates on our business is an important factor in understanding period to period comparisons. Our international revenues are favorably impacted as the U.S. dollar weakens relative to other foreign currencies, and unfavorably impacted as the U.S dollar strengthens relative to other foreign currencies. We use non-GAAP constant currency revenues and constant currency revenue growth for financial and operational decision-making and as a means to evaluate period-to-period comparisons. We believe the presentation of results on a constant currency basis in addition to GAAP results helps improve the ability to understand our performance because they exclude the effects of foreign currency volatility that are not indicative of our core operating results.

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

Constant currency revenue growth (expressed as a percentage) is calculated by determining the increase in current period revenues over prior period revenues where current period foreign currency revenues are translated using prior period exchange rates and hedging benefits 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 impact on our international revenues and total revenues (in millions, unaudited):

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2016	2017	2016	2017
EMEA revenues	$ 7,392	$ 9,097	$ 22,007	$ 25,733
Exclude foreign exchange impact on current period revenues using prior year rates	361	(283)	867	557
Exclude hedging impact recognized in current period	(104)	161	(293)	15
EMEA constant currency revenues	$ 7,649	$ 8,975	$ 22,581	$ 26,305
Prior period EMEA revenues, excluding hedging impact	$ 6,286	$ 7,288	$ 18,405	$ 21,714
EMEA revenue growth	14%	23%	15%	17%
EMEA constant currency revenue growth	22%	23%	23%	21%
APAC revenues	$ 3,248	$ 4,199	$ 8,951	$ 11,548
Exclude foreign exchange impact on current period revenues using prior year rates	(210)	54	(142)	(33)
Exclude hedging impact recognized in current period	0	18	(31)	(52)
APAC constant currency revenues	$ 3,038	$ 4,271	$ 8,778	$ 11,463
Prior period APAC revenues, excluding hedging impact	$ 2,406	$ 3,248	$ 6,893	$ 8,920
APAC revenue growth	30%	29%	25%	29%
APAC constant currency revenue growth	26%	31%	27%	29%
Other Americas revenues	$ 1,162	$ 1,546	$ 3,185	$ 4,230
Exclude foreign exchange impact on current period revenues using prior year rates	45	(26)	346	(111)
Exclude hedging impact recognized in current period	(1)	12	(28)	8
Other Americas constant currency revenues	$ 1,206	$ 1,532	$ 3,503	$ 4,127
Prior period Other Americas revenues, excluding hedging impact	$ 949	$ 1,161	$ 2,777	$ 3,157
Other Americas revenue growth	20%	33%	12%	33%
Other Americas constant currency revenue growth	27%	32%	26%	31%
United States revenues	$ 10,649	$ 12,930	$ 30,065	$ 37,021
United States revenue growth	22%	21%	23%	23%
Total revenues	$ 22,451	$ 27,772	$ 64,208	$ 78,532
Total constant currency revenues	$ 22,542	$ 27,708	$ 64,927	$ 78,916
Total revenue growth	20%	24%	20%	22%
Total constant currency revenue growth	23%	24%	23%	24%

For the three months ended September 30, 2017, our revenues from EMEA were favorably impacted by changes in foreign currency exchange rates, primarily because the U.S. dollar weakened relative to the Euro. For the nine months ended September 30, 2017, our revenues from EMEA were unfavorably impacted by changes in foreign currency exchange rates, primarily because the U.S. dollar strengthened relative to the British pound.

For the three months ended September 30, 2017, our revenues from APAC were unfavorably impacted by changes in foreign currency exchange rates, primarily because the U.S. dollar strengthened relative to the Japanese yen, partially offset by the impact of the U.S. dollar weakening relative to the Australian dollar and Indian rupee. For the nine months ended September 30, 2017, our revenues from APAC were favorably impacted by changes in foreign currency exchange rates, primarily because the U.S. dollar weakened relative to the Australian dollar, South Korean won and Taiwanese dollar, partially offset by the impact of the U.S. dollar strengthening relative to the Japanese yen.

For the three months ended September 30, 2017, our revenues from Other Americas were favorably impacted by changes in foreign currency exchange rates, primarily because the U.S. dollar weakened relative to the Canadian dollar, Brazilian real, and Mexican peso partially offset by the impact of the U.S. dollar strengthening relative to the Argentine peso. For the nine months ended September 30, 2017, our revenues from Other Americas were favorably impacted by changes in foreign currency exchange rates, primarily because the U.S. dollar weakened relative to the Brazilian real.

Costs and Expenses

Cost of Revenues

Cost of revenues consists of traffic acquisition costs (TAC) which are paid to Google Network Members primarily for ads displayed on their properties and 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.

Additionally, other cost of revenues (which is the cost of revenues excluding traffic acquisition costs) includes the following:

- The expenses associated with the operation of our data centers (including depreciation, labor including SBC, energy, bandwidth, and other equipment costs);
- Content acquisition costs primarily related to payments to certain content providers from whom we license their 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);
- Credit card and other transaction fees related to processing customer transactions;
- Inventory related costs for hardware we sell; and
- Amortization of certain intangible assets.

The following tables present our costs of revenues, including traffic acquisition costs (in millions, unaudited):

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2016	2017	2016	2017
Traffic acquisition costs	$ 4,182	$ 5,502	$ 11,945	$ 15,222
Other cost of revenues	4,517	5,646	12,532	16,094
Total cost of revenues	$ 8,699	$ 11,148	$ 24,477	$ 31,316
Total cost of revenues as a percentage of revenues	38.7%	40.1%	38.1%	39.9%

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2016	2017	2016	2017
Traffic acquisition costs to distribution partners	$ 1,559	$ 2,401	$ 4,128	$ 6,255
Traffic acquisition costs to distribution partners as a percentage of Google properties revenues (Google properties TAC rate)	9.7%	12.2%	9.0%	11.3%
Traffic acquisition costs to Google Network Members	$ 2,623	$ 3,101	$ 7,817	$ 8,967
Traffic acquisition costs to Google Network Members as a percentage of Google Network Members' properties revenues (Network Members TAC rate)	70.3%	71.4%	70.0%	71.2%
Traffic acquisition costs	$ 4,182	$ 5,502	$ 11,945	$ 15,222
Traffic acquisition costs as a percentage of advertising revenues (Aggregate TAC rate)	21.1%	22.9%	21.0%	22.3%

The cost of revenues that we incur related to revenues generated from ads placed on the properties of our Google Network Members are significantly higher than the costs of revenues that we incur related to revenues generated from ads placed on Google properties because most of the advertiser revenues from ads served on Google Network Members' properties are paid as TAC to our Google Network Members.

Cost of revenues increased $2,449 million from the three months ended September 30, 2016 to the three months ended September 30, 2017 and increased $6,839 million from the nine months ended September 30, 2016 to the nine months ended September 30, 2017 due to various factors, including (1) traffic acquisition costs, (2) data center costs which include depreciation, labor (including SBC), energy, bandwidth, and other equipment costs, (3) content acquisition costs as a result of increased activities related to YouTube, and (4) hardware related costs.

The increase in TAC to distribution partners was driven by an increase in Google properties revenues. The increase in the associated Google properties TAC rate was driven by changes in partner agreements and the ongoing shift to mobile, which carries higher TAC because more mobile searches are channeled through paid access points. The increases in TAC to Google Network Members and the associated Network Members TAC rate were driven by the continued underlying shift in advertising buying from our traditional network business to programmatic advertising buying which carries higher TAC and the impact from sales allowances. The increase in the aggregate TAC rate was also partially offset by a favorable revenue mix shift from Google Network Member properties to Google properties.

We expect cost of revenues to increase in dollar amount and as a percentage of total revenues in future periods based on a number of factors, including the following:

- The relative revenue growth rates of Google properties and our Google Network Members' properties;
- Traffic acquisition costs paid to our distribution partners, which are affected by changes in device mix between mobile, desktop and tablet, partner mix, partner agreement terms such as revenue share arrangements, and the percentage of queries channeled through paid access points;
- Traffic acquisition costs paid to Google Network Members, which are affected by ongoing adoption of programmatic advertising buying and changes in partner agreement terms;
- The growth rates of expenses associated with our data center operations, content acquisition costs, as well as our hardware inventory and related costs; and
- Increased proportion of non-advertising revenues as part of our total revenues.

Research and Development

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

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2016	2017	2016	2017
Research and development expenses	$ 3,596	$ 4,205	$ 10,326	$ 12,319
Research and development expenses as a percentage of revenues	16.0%	15.1%	16.1%	15.7%

R&D expenses consist primarily of:

- Labor and facilities-related costs, including SBC, for employees responsible for R&D of our existing and new products and services and
- Depreciation and equipment-related expenses.

R&D expenses increased $609 million from the three months ended September 30, 2016 to the three months ended September 30, 2017. The increase was primarily due to an increase in labor and facilities-related costs of $363 million, largely resulting from a 17% increase in headcount, partially offset by the shift in the timing of our annual equity refresh cycle. In addition, there was an increase in depreciation and equipment-related expenses of $206 million.

R&D expenses increased $1,993 million from the nine months ended September 30, 2016 to the nine months ended September 30, 2017. The increase was primarily due to an increase in labor and facilities-related costs of $1,465 million, largely resulting from a 17% increase in headcount. In addition, there was an increase in depreciation and equipment-related expenses of $358 million and an increase in professional services expenses of $107 million largely due to additional expenses incurred for outsourced services.

We expect that R&D expenses will increase in dollar amount and may fluctuate as a percentage of revenues in future periods.

Sales and Marketing

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

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2016	2017	2016	2017
Sales and marketing expenses	$ 2,565	$ 3,042	$ 7,367	$ 8,583
Sales and marketing expenses as a percentage of revenues	11.5%	11.0%	11.5%	10.9%

Sales and marketing expenses consist primarily of:

- Labor and facilities-related costs, including SBC, for employees engaged in sales and marketing, sales support, and certain customer service functions; and
- Advertising and promotional expenditures related to our products and services.

Sales and marketing expenses increased $477 million from the three months ended September 30, 2016 to the three months ended September 30, 2017. The increase was primarily due to an increase in advertising and promotional expenses of $251 million, largely resulting from increases in marketing and promotion-related expenses for our hardware products and Cloud offerings. In addition, there was an increase in labor and facilities-related costs of $151 million, largely resulting from a 5% increase in headcount, partially offset by the shift in the timing of our annual equity refresh cycle.

Sales and marketing expenses increased $1,216 million from the nine months ended September 30, 2016 to the nine months ended September 30, 2017. The increase was primarily due to an increase in labor and facilities-related costs of $643 million, largely resulting from a 6% increase in headcount. In addition, there was an increase in advertising and promotional expenses of $480 million, largely resulting from increases in marketing and promotion-related expenses for our hardware products.

We expect that sales and marketing expenses will increase in dollar amount and may fluctuate as a percentage of revenues in future periods.

General and Administrative

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

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2016	2017	2016	2017
General and administrative expenses	$ 1,824	$ 1,595	$ 4,961	$ 5,096
General and administrative expenses as a percentage of revenues	8.1%	5.7%	7.7%	6.5%

General and administrative expenses consist primarily of:

- Labor and facilities-related costs, including SBC, for employees in our facilities, finance, human resources, information technology, and legal organizations;
- Depreciation and equipment-related expenses;
- Professional services fees primarily related to outside legal, audit, information technology consulting, and outsourcing services; and
- Amortization of certain intangible assets.

General and administrative expenses decreased $229 million from the three months ended September 30, 2016 to the three months ended September 30, 2017. The decrease was primarily due to a decrease in labor and facilities-related costs of $184 million, partly resulting from the shift in the timing of our annual equity refresh cycle, as well as decreases in miscellaneous general and administrative expenses and reduced allocations.

General and administrative expenses increased $135 million from the nine months ended September 30, 2016 to the nine months ended September 30, 2017. The increase was primarily due to an increase in professional service fees of $160 million due to additional expenses incurred for consulting and outsourced services and lower legal related costs in the first quarter of 2016. In addition, there was an increase in labor and facilities-related costs of $59 million, largely resulting from a 12% increase in headcount. These increases were partially offset by decreases in miscellaneous general and administrative expenses and reduced allocations.

We expect general and administrative expenses will increase in dollar amount and may fluctuate as a percentage of revenues in future periods.

European Commission Fine

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 €2.42 billion (approximately $2.74 billion as of June 27, 2017) fine, which was accrued in the second quarter of 2017.

Other Income (Expense), Net

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

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2016	2017	2016	2017
Other income (expense), net	$ 278	$ 197	$ 216	$ 693
Other income (expense), net, as a percentage of revenues	1.2%	0.7%	0.3%	0.9%

Other income (expense), net, decreased $81 million from the three months ended September 30, 2016 to the three months ended September 30, 2017. This decrease was primarily driven by losses recorded related to marketable and non-marketable investments. These losses were offset by reduced costs of our foreign currency hedging activities.

Other income (expense), net, increased $477 million from the nine months ended September 30, 2016 to the nine months ended September 30, 2017. This increase was primarily driven by reduced costs of our foreign currency hedging activities and decreased losses on marketable investments.

The costs of our foreign exchange hedging activities recognized in other income (expense), net, are primarily a function of the notional amount of the option and forward contracts and their related duration, the movement of foreign exchange rates relative to the contract prices, the volatility of foreign exchange rates, and forward points. The hedging costs expensed in other income (expense), net, decreased as a result of less option premiums paid after we began to use foreign currency forward contracts to hedge our forecasted revenues in the fourth quarter of 2016.

We expect that other income (expense), net, will fluctuate in dollar amount in future periods as it is largely driven by market dynamics.

Provision for Income Taxes

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

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2016	2017	2016	2017
Provision for income taxes	$ 984	$ 1,247	$ 3,148	$ 3,493
Effective tax rate	16.3%	15.6%	18.2%	18.2%

Our effective tax rate decreased from the three months ended September 30, 2016 to the three months ended September 30, 2017 as a result of a proportionate decrease in unrecognized tax benefits offset by other miscellaneous items. Our provision for income taxes increased from the three months ended September 30, 2016 to the three months ended September 30, 2017 as a result of an increase in taxable income year over year.

Our effective tax rate remained flat from the nine months ended September 30, 2016 to the nine months ended September 30, 2017. Our provision for income taxes increased from the nine months ended September 30, 2016 to the nine months ended September 30, 2017 as a result of an increase in taxable income year over year.

Our future effective tax rate could be adversely affected by earnings being lower than anticipated in countries that have lower statutory rates and higher than anticipated in countries that have higher statutory rates, the net gains and losses recognized by legal entities on certain hedges and related hedged intercompany and other transactions under our foreign exchange risk management program, changes in the valuation of our deferred tax assets, or changes in tax laws, regulations, or accounting principles, as well as certain discrete items.

Capital Resources and Liquidity

As of September 30, 2017, we had $100.1 billion in cash, cash equivalents, and marketable securities. Cash equivalents and marketable securities are comprised of time deposits, money market and other funds, highly liquid debt instruments of the U.S. government and its agencies, debt instruments issued by foreign governments, debt instruments issued by municipalities in the U.S., corporate debt securities, agency mortgage-backed securities, and asset-backed securities. From time to time, we may hold marketable equity securities obtained through acquisitions or strategic investments in private companies that subsequently go public.

As of September 30, 2017, $60.5 billion of the $100.1 billion of cash, cash equivalents, and marketable securities were held by our foreign subsidiaries. If these funds were needed for our operations in the U.S., we would be required to accrue and pay U.S. taxes to repatriate these funds. However, our intent is to permanently reinvest these funds outside of the U.S. and our current plans do not demonstrate a need to repatriate them to fund our U.S. operations.

Our principal sources of liquidity are our cash, cash equivalents, and marketable securities, as well as the cash flow that we generate from our operations. We have a short-term debt financing program of up to $5.0 billion through the issuance of commercial paper. Net proceeds from this program are used for general corporate purposes. We had no commercial paper outstanding as of September 30, 2017. We have a $4.0 billion revolving credit facility expiring in February 2021. The interest rate for the credit facility is determined based on a formula using certain market rates. As of September 30, 2017, no amounts were outstanding under the credit facility. We believe that our sources of funding will be sufficient to satisfy our currently anticipated cash requirements including capital expenditures, working capital requirements, potential acquisitions, and other liquidity requirements through at least the next 12 months.

As of September 30, 2017, we have senior unsecured notes outstanding due in 2021, 2024, and 2026 with a total carrying value of $3.9 billion and a total estimated fair value of $4.0 billion.

In October 2016, the board of directors of Alphabet authorized the company to repurchase up to $7,019,340,976.83 of its Class C capital stock. In the nine months ended September 30, 2017, we repurchased and subsequently retired 3.1 million shares of Alphabet Class C capital stock for an aggregate amount of $2.7 billion.

In January 2017, Temasek, a Singapore-based investment company, signed a binding commitment to purchase a non-controlling interest in Verily for an aggregate of $800 million in cash. We received the first tranche of $480 million in the first quarter of 2017 and the final tranche of $320 million in the third quarter of 2017.

In September 2017, we entered into an agreement with HTC Corporation (HTC) to acquire a team of engineers and a non-exclusive license for HTC intellectual property for approximately $1.1 billion in cash. The transaction is expected to close in early 2018.

At December 31, 2016, we had a $1.4 billion interest-free, three-year prepayable promissory note (Note Receivable) due October 2017. The Note Receivable was fully repaid in May 2017.

For the nine months ended September 30, 2016 and 2017, our cash flows were as follows (in millions, unaudited):

	Nine Months Ended September 30,	
	2016	2017
Net cash provided by operating activities	$ 26,623	$ 26,823
Net cash used in investing activities	$ (26,463)	$ (24,427)
Net cash used in financing activities	$ (7,440)	$ (5,120)

Cash Provided by Operating Activities

Our largest source of cash provided by our operations are advertising revenues generated by Google properties and Google Network Members' properties. Additionally, we generate cash through sales of apps, in-app purchases and digital content, hardware products, licensing arrangements, and service fees received for Google Cloud offerings.

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

Net cash provided by operating activities increased from the nine months ended September 30, 2016 to the nine months ended September 30, 2017 primarily due to increases in cash received from advertising revenues and Google other revenues (net of payouts to app developers) offset by increases in cash paid for cost of revenues, operating expenses, and income taxes.

Cash Used in Investing Activities

Cash provided by or used in investing activities primarily consists of purchases of property and equipment, purchases, maturities, and sales of marketable and non-marketable securities, payments for acquisitions, and proceeds from the collection of notes receivable.

Net cash used in investing activities decreased from the nine months ended September 30, 2016 to the nine months ended September 30, 2017 primarily due to increases in maturities and sales of marketable securities, decreases in cash collateral paid related to securities lending, and increases in cash proceeds received from the collection of the Lenovo note receivable. These items were offset by increases in purchases of marketable securities and increases in purchases of property and equipment.

Cash Used in Financing Activities

Cash provided by or used in financing activities consists primarily of net proceeds or payments from issuance or repayments of debt, repurchases of capital stock, net proceeds or payments from stock-based award activities, and proceeds from the sale of subsidiary shares.

Net cash used in financing activities decreased from the nine months ended September 30, 2016 to the nine months ended September 30, 2017 primarily driven by decreases in the repayment of debt, decreases in repurchases of capital stock, and increases in proceeds from the sale of subsidiary shares. These items were offset by decreases in proceeds received from the issuance of debt and increases in net payments related to stock-based award activities.

Contractual Obligations

We had long-term taxes payable of $4.4 billion as of September 30, 2017 primarily related to uncertain tax positions. At this time, we are unable to make a reasonably reliable estimate of the timing of payments in individual years beyond 12 months due to uncertainties in the timing of tax audit outcomes.

Critical Accounting Policies and Estimates

We prepare our consolidated financial statements in accordance with U.S. Generally Accepted Accounting Principles (GAAP). In doing so, we have to make estimates and assumptions that affect our reported amounts of assets, liabilities, revenues, and expenses, as well as related disclosure of contingent assets and liabilities. In some cases, we could reasonably have used different accounting policies and estimates. In some cases, changes in the accounting estimates are reasonably likely to occur from period to period. Accordingly, actual results could differ materially from our estimates. To the extent that there are material differences between these estimates and actual results, our financial condition or results of operations will be affected. We base our estimates on past experience and other assumptions that we believe are reasonable under the circumstances, and we evaluate these estimates on an ongoing basis. We refer to accounting estimates of this type as critical accounting policies and estimates, which we discuss further below. We have reviewed our critical accounting policies and estimates with the audit committee of our board of directors.

Revenues

For the sale of third-party goods and services, we evaluate whether we are the principal, and report revenues on a gross basis, or an agent, and report revenues on a net basis. In this assessment, we consider if we obtain control of the specified goods or services before they are transferred to the customer, as well as other indicators such as the party primarily responsible for fulfillment, inventory risk, and discretion in establishing price.

See Note 1 of Part I, Item 1 of this Quarterly Report on Form 10-Q for the summary of significant accounting policies. In addition, see Part I, Item 7, "Critical Accounting Policies and Estimates" in our Annual Report on Form 10-K for the year ended December 31, 2016. There have been no other material changes to our critical accounting policies and estimates since our Annual Report on Form 10-K for the year ended December 31, 2016.

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, and our Proxy Statements 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. You may read and copy any materials we file with the SEC at the SEC's Public Reference Room at 100 F Street, NE, Washington, D.C. 20549. You can get information on the operation of the Public Reference Room by calling the SEC at 1-800-SEC-0330.

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, including SEC filings, investor events, press and earnings releases, and blogs. Further corporate governance information, including our certificate of incorporation, bylaws, governance guidelines, board committee charters, and code of conduct, is also available on our investor relations website under the heading "Other." The content of our websites are not incorporated by reference into this Quarterly Report on Form 10-Q or in any other report or document we file with the SEC, and any references to our websites are intended to be inactive textual references only.

ITEM 3. QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK

We are exposed to financial market risks, including changes in currency exchange rates and interest rates.

Foreign Currency Exchange Risk

We transact business globally in multiple currencies. Our international revenues, as well as costs and expenses denominated in foreign currencies, expose us to the risk of fluctuations in foreign currency exchange rates against the U.S. dollar. In general, we are a net receiver of foreign currencies and therefore benefit from a weakening of the U.S. dollar and are adversely affected by a strengthening of the U.S. dollar relative to the foreign currency. As of September 30, 2017, our most significant currency exposures are the British pound, Euro, and Japanese yen.

We use foreign currency forwards and option contracts, including collars (an option strategy comprised of a combination of purchased and written options) to protect our forecasted U.S. dollar-equivalent earnings from changes in foreign currency exchange rates. When the U.S. dollar strengthens, gains from foreign currency options and forwards reduce the foreign currency losses related to our earnings. When the U.S. dollar weakens, losses from foreign currency options and forwards offset the foreign currency gains related to our earnings. These hedging contracts reduce, but do not entirely eliminate, the impact of currency exchange rate movements. We designate these contracts as cash flow hedges for accounting purposes. We record the effective portion of these contracts as a component of accumulated other comprehensive income (AOCI) and subsequently reclassify them into revenues to offset the hedged exposures as they occur. For foreign currency collars, we include the change in time value in our assessment of hedge effectiveness. For forwards and all other option contracts, we exclude the change in the forward points and time value from our assessment of hedge effectiveness. We recognize changes of the excluded components in other income (expense), net.

We considered the historical trends in currency exchange rates and determined that it was reasonably possible that changes in exchange rates of 10% could be experienced in the near term. If the U.S. dollar weakened by 10% as of September 30, 2017, the amount recorded in AOCI related to our foreign exchange contracts before tax effect would have been approximately $1.1 billion lower as of September 30, 2017. The change in the value recorded in AOCI would be expected to offset a corresponding foreign currency change in the forecasted hedged revenues when recognized.

In addition, we use foreign exchange forward contracts to offset the foreign exchange risk on our assets and liabilities denominated in currencies other than the local currency of the subsidiary. These forward contracts reduce, but do not entirely eliminate the impact of currency exchange rate movements on our assets and liabilities. The foreign currency gains and losses on the assets and liabilities are recorded in other income (expense), net, which are offset by the gains and losses on the forward contracts.

We considered the historical trends in currency exchange rates and determined that it was reasonably possible that adverse changes in exchange rates of 10% for all currencies could be experienced in the near term. These reasonably possible adverse changes in exchange rates of 10% were applied to total monetary assets and liabilities denominated in currencies other than the local currencies at the balance sheet dates to compute the adverse impact these changes would have had on our income before income taxes in the near term. These changes would have resulted in an adverse impact on income before income taxes of approximately $65 million as of September 30, 2017. The adverse impact as of September 30, 2017 is after consideration of the offsetting effect of approximately $325 million from foreign exchange contracts in place for the month of September 30, 2017.

Interest Rate Risk

Our investment strategy is to achieve a return that will allow us to preserve capital and maintain liquidity requirements. We invest primarily in debt securities including those of the U.S. government and its agencies, corporate debt securities, agency mortgage-backed securities, money market and other funds, municipal securities, time deposits, asset backed securities, and debt instruments issued by foreign governments. By policy, we limit the amount of credit exposure to any one issuer. Our investments in both fixed rate and floating rate interest earning securities carry a degree of interest rate risk. Fixed rate securities may have their fair market value adversely impacted due to a rise in interest rates, while floating rate securities may produce less income than predicted if interest rates fall. As of December 31, 2016 and September 30, 2017, unrealized losses on our marketable debt securities were primarily due to temporary interest rate fluctuations as a result of higher market interest rates compared to interest rates at the time of purchase. We account for both fixed and variable rate securities at fair value with changes on gains and losses recorded in AOCI until the securities are sold.

We considered the historical volatility of short-term interest rates and determined that it was reasonably possible that an adverse change of 100 basis points could be experienced in the near term. A hypothetical 1.00% (100 basis points) increase in interest rates would have resulted in a decrease in the fair value of our marketable securities of approximately $1.8 billion as of September 30, 2017.

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, 2017, 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

There were no changes in our internal control over financial reporting that occurred during the quarter ended September 30, 2017 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 11 “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, 2016, which could adversely affect our business, financial condition, results of operations, cash flows, and the trading price of our common and capital stock. There have been no material changes to our risk factors since our Annual Report on Form 10-K for the year ended December 31, 2016.

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		XBRL Instance Document		
101.SCH		XBRL Taxonomy Extension Schema Document		
101.CAL		XBRL Taxonomy Extension Calculation Linkbase Document		
101.DEF		XBRL Taxonomy Extension Definition Linkbase Document		
101.LAB		XBRL Taxonomy Extension Label Linkbase Document		
101.PRE		XBRL Taxonomy Extension Presentation Linkbase Document		

* Filed herewith.

‡ Furnished herewith.

SIGNATURE

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

	ALPHABET INC.
October 26, 2017	By: /s/ RUTH M. PORAT
	Ruth M. Porat
	Senior Vice President and Chief Financial Officer
	ALPHABET INC.
October 26, 2017	By: /s/ JAMES G. CAMPBELL
	James G. Campbell
	Vice President, Corporate Controller, and Chief Accounting Officer

Exhibit 31.01

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

I, Larry Page, certify that:

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

Date: October 26, 2017

/S/ LARRY PAGE

Larry Page
Chief Executive Officer
(Principal Executive Officer)

Exhibit 31.02

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

I, Ruth Porat, certify that:

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

Date: October 26, 2017

/S/ RUTH PORAT

Ruth Porat

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

Exhibit 32.01

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

I, Larry Page, 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, 2017, fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934 and that information contained in such Quarterly Report on Form 10-Q fairly presents, in all material respects, the financial condition and results of operations of Alphabet Inc.

Date: October 26, 2017

By:	/s/ LARRY PAGE
Name:	Larry Page
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, 2017, fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934 and that information contained in such Quarterly Report on Form 10-Q fairly presents, in all material respects, the financial condition and results of operations of Alphabet Inc.

Date: October 26, 2017

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.