Google Ireland Holdings Unlimited Company

Directors' Report and Financial Statements

Financial Year Ended 31 December 2019

CONTENTS

DIRECTORS AND OTHER INFORMATION

Board of directors

Thomas Hutchinson (USA)
Kenneth Rubenstein (USA)
Damon Richardson (USA)
Theodore Lazarus (USA) (alternate director for Kenneth Rubenstein)
John Flippen (USA) (alternate director for Kenneth Rubenstein)
Chris Garrod (Bermuda) (alternate director for Thomas Hutchinson)
Jacqueline King (Bermuda) (alternate director for Kenneth Rubenstein)

Company Secretary

Kenneth Yi

Registered office

70 Sir John Rogerson's Quay
Dublin 2

Registered number: 369511

Independent auditors

Ernst & Young
Chartered Accountants
Ernst & Young Building
Harcourt Centre
Harcourt Street
Dublin 2

Solicitors

Matheson
70 Sir John Rogerson's Quay
Dublin 2

DIRECTORS' REPORT
For the Year Ended 31 December 2019

The directors present their annual report and audited financial statements for the year ended 31 December 2019.

Principal activities and future developments
Google Ireland Holdings Unlimited Company (the "Company") is a subsidiary of Google APAC Technology Pte. Ltd, whose ultimate parent undertaking is Alphabet Inc.

Up to November 2019 the activities of the Company were that of a holding, management, trading investment and intellectual property licencing company. The Company's turnover was derived from the licensing of intellectual property to a subsidiary undertaking.

In November 2019, the Company distributed its IP licence rights to its then immediate parent, in addition to other intangible assets and certain equity investments.

In December 2019, the Company distributed a majority of its debt security investments and other financial assets primarily comprising intercompany loan receivables to its then immediate parent.

From December 2019, the principal activities of the Company were that of a holding company only.

Review of the performance of the business
Turnover
Turnover increased from US$25.7 billion in 2018 to US$26.5 billion in 2019, an increase of US$0.8 billion. This increase is primarily due to the increase in turnover recorded by the Company's subsidiaries, which results in higher royalty payments from subsidiaries of the Company.

Cost of sales
Cost of sales decreased from US$107.5 million in 2018 to US$87.3 million in 2019, a decrease of US$20.2 million. Cost of sales consists primarily of royalties paid to a fellow group undertaking.

Administrative expenses
Administrative expenses increased from US$11.1 billion in 2018 to US$14.1 billion in 2019, an increase of US$3.0 billion. This increase is primarily due to an increase in research and development (“R&D”) expenses. The Company incurred US$10.4 billion (2018: US$9.6 billion) of R&D expenditure in the year pursuant to a cost sharing agreement with a fellow group undertaking. These expenses increased due to an increase in the worldwide spend on R&D.

Income from shares in group undertakings
Dividend income from shares in group undertakings was US$597.5 million in 2019 (2018: US$2.9 million).

Interest income
Interest income decreased from US$1.1 billion in 2018 to US$0.8 billion in 2019, a decrease of US$0.3 billion. The decrease was driven by a decrease in short term investments held by the Company during the period.

Statement of financial position
The Company's total assets decreased from US$61.4 billion in 2018 to US$1.1 billion in 2019, a decrease of US$60.3 billion. The decrease has been primarily driven by a decrease in short term investments and other financial assets resulting from distributions paid during the year. Shareholders' equity decreased from a debit of US$60.5 billion in 2018 to a credit of US$0.5 billion in 2019, a decrease of US$61 billion. This decrease is driven by distributions paid in the year.

Results for the year and state of affairs
The statement of profit and loss and comprehensive income, the statement of financial position and the statement of changes in equity are set out on pages 10, 11 and 12 respectively. The profit for the financial year, amounting to US$13.7 billion (2018: US$15.5 billion), has been credited to reserves.

DIRECTORS' REPORT - continued
For the Year Ended 31 December 2019

Principal risks and uncertainties
The Company and its subsidiaries operate in a market which is characterised by continuous change. As a result, the Company faces risks and uncertainties which may have a significant impact on its ability to achieve continued success within its market.

Up to November 2019, there is a dependence on the Company's subsidiaries to generate turnover and pay royalties. A reduction of growth in turnover of these subsidiaries could therefore also adversely affect the Company. In addition, up to November 2019, the Company bears expenses through cost-sharing arrangements that may impact on the Company's continued profitability.

As at 31 December 2019, the Company acts primarily as a holding company for subsidiary undertakings and is dependent on the operations and funds of its subsidiaries. The Company’s subsidiary undertakings may be restricted in their ability to pay cash dividends or to make other distributions to the Company which represents a risk to the Company.

The global outbreak of the novel coronavirus (COVID-19) subsequent to the year end is leading to a global market disruption. Such an operating environment has the potential to have an adverse impact on the Company’s operations and financial position. The future impact of the current economic situation is uncertain and difficult to predict.

Financial risk management
The Company is exposed to financial risks arising from the normal course of business. The key financial risks faced include market risk and credit risk. The following sections provide details regarding the Company’s exposure and management of financial risk:

Market risk
Market risk is the risk that the fair value or future cash flows of a financial instrument will fluctuate because of changes in market prices. Market risk primarily includes foreign exchange risk and interest rate risk.

Foreign exchange risk
The Company has transactional currency exposures arising from transactions that are denominated in currencies other than the functional currency of the Company. The Company also holds cash and cash equivalents, amounts due from related companies and amounts due to related companies in various foreign currencies.

Exposure to foreign currency risk is monitored on an ongoing basis to ensure that the net exposure is at an acceptable level. The Company has a currency policy in place including a hedging programme and the exposure to currency risk is monitored on an ongoing basis.

Interest rate risk
Interest rate risk is the risk that the fair value of the Company’s financial instruments will fluctuate because of changes in market interest rates. Up to December 2019, the Company's exposure to interest-rate risk arises primarily from its investment in marketable securities. Interest rate risk is monitored on an ongoing basis and action is taken where appropriate.

Credit risk
Credit risk is the risk that the counterparty will not meet its obligations under a financial instrument or customer contract, leading to a financial loss. The Company is subject to concentrations of credit risk principally from cash and cash equivalents, marketable securities and foreign exchange contracts. This risk is monitored on an ongoing basis.

Subsidiary undertakings
The statutory information concerning subsidiary undertakings, required by Section 314 of the Companies Act, 2014 is given in note 12 to the financial statements.

Research and development
The Company incurred research and development expenditure during the year amounting to US$10.4 billion (2018: US$9.6 billion).

DIRECTORS' REPORT - continued
For the Year Ended 31 December 2019

Non preparation of group financial statements
In accordance with Section 300 of the Companies Act 2014 and Regulation 8 of the European Communities (Companies: Group Accounts) Regulations 1992, the Company is exempt from the requirement to prepare group financial statements. The financial statements present information about the Company as an individual undertaking and not about its group. The Company and its subsidiaries are included in the group financial statements of Alphabet Inc., a company incorporated in the United States of America.

Directors and secretary and their interests
The directors who served during the year were:

Thomas Hutchinson
Kenneth Rubenstein
Theodore Lazarus
Damon Richardson
John Flippen

In accordance with the Articles of Association, the directors are not required to retire by rotation.

The directors, secretary and their immediate families held no interest in the share capital of the Company at 31 December 2019 or 31 December 2018. At year end and during the financial year, the directors and secretary held interests in the share capital of the ultimate parent company, Alphabet Inc, however these interests in aggregate do not represent more than 1% in nominal value of Alphabet Inc's issued share capital, and are therefore not disclosed in accordance with Section 260(f) of the Companies Act 2014.

Dividends and distributions
In October 2019, the Company received a distribution of intangible assets from a subsidiary undertaking and the Company immediately distributed those intangible assets at its carrying value of US$nil to its then immediate parent. In November 2019, the Company distributed its intangible assets at carrying value of US$171 million and financial assets at carrying value of US$15.4 billion to its then immediate parent. In December 2019, the Company distributed the majority of its debt security investments at fair value of US$26.7 billion, in addition to net assets amounting to US$3.0 billion to its then immediate parent.

During 2019, the Company also approved and paid dividends and distributions in the amount of US$30.0 billion (2018: US$22.9 billion) to its then immediate parent. The Company did not propose a final dividend.

Accounting records
The measures that the directors have taken to secure compliance with the requirements of sections 281 to 285 of the Companies Act 2014, with regard to the keeping of accounting records, include the provision of appropriate resources to maintain adequate accounting records throughout the Company, including the appointment of personnel with appropriate qualifications, experience and expertise. The accounting records are kept and maintained at Gordon House, Barrow Street, Dublin 4.

Going concern
The directors of the Company have received written assurances from a fellow group undertaking, Google LLC, that it will continue to provide adequate financial support to the Company for a period of at least twelve months from the date of approval of these financial statements to enable the Company to discharge its financial obligations to all creditors as they fall due. On this basis, the directors are satisfied that it is appropriate to prepare the financial statements on a going concern basis.

Important events since year end
There were no material post balance sheet events that require adjustment to or disclosure in the financial statements.

DIRECTORS' REPORT - continued
For the Year Ended 31 December 2019

Directors' responsibilities statement in respect of the financial statements
The directors are responsible for preparing the directors' report and the financial statements in accordance with Irish law and regulations.

Irish company law requires the directors to prepare the financial statements for each financial year that give a true and fair view of the Company's assets, liabilities and financial position as at the end of the financial year and of the profit or loss of the Company for the financial year.

Under the law, the directors have elected to prepare the financial statements in accordance with Financial Reporting Standard 101 'Reduced Disclosure Framework' (accounting standards issued by the Financial Reporting Council).

Under Irish law, the directors shall not approve the financial statements unless they are satisfied that they give a true and fair view of the Company’s assets, liabilities and financial position as at the end of the financial year and the profit or loss of the Company for the financial year.

In preparing these financial statements, the directors are required to:

- select suitable accounting policies and then apply them consistently;
- make judgements and accounting estimates that are reasonable and prudent;
- state whether the financial statements have been prepared in accordance with applicable accounting standards, identify those standards, and note the effect and the reasons for any material departure from those standards; and
- prepare the financial statements on the going concern basis unless it is inappropriate to presume that the Company will continue in business.

The directors are responsible for ensuring that the Company keeps adequate accounting records which correctly explain and record the transactions of the Company, enable at any time the assets, liabilities, financial position and profit or loss of the Company to be determined with reasonable accuracy, enable them to ensure that the financial statements and directors' report comply with the Companies Act 2014 and enable the financial statements to be audited. They are also responsible for safeguarding the assets of the Company and hence for taking reasonable steps for the prevention and detection of fraud and other irregularities.

Statement on relevant audit information
Each director in office at the date of this report has confirmed that:

- so far as he or she is aware, there is no relevant audit information of which the Company's statutory auditors are unaware, and
- he or she has taken all the steps that he or she ought to have taken as a director in order to make himself or herself aware of any relevant audit information and to establish that the Company's statutory auditors are aware of that information.

Audit committee
The directors of the Company decided not to establish an audit committee as the ultimate holding company, Alphabet, operates an audit committee that undertakes the financial oversight functions for the group as a whole, including the Company.

Auditor
The auditor, Ernst & Young, Chartered Accountants, continue in office in accordance with section 383(2) of the Companies Act 2014.

This report was approved by the Board and signed on its behalf.

Damon Richardson	Tom Hutchinson
Damon Richardson	**Thomas Hutchinson**
Director	Director
Date: 9 December 2020	Date: 9 December 2020

Building a better
working world

INDEPENDENT AUDITOR'S REPORT TO THE MEMBERS OF GOOGLE IRELAND HOLDINGS UNLIMITED COMPANY

Opinion

We have audited the financial statements of Google Ireland Holdings Unlimited Company ('the Company') for the year ended 31 December 2019, which comprise the Statement of Profit and Loss and other Comprehensive Income, the Statement of Financial Position, the Statement of Changes in Equity and notes to the financial statements, including the summary of significant accounting policies set out in note 3. The financial reporting framework that has been applied in their preparation is Irish Law and Accounting Standards including FRS 101 Reduced Disclosure Framework (Irish Generally Accepted Accounting Practice).

In our opinion the financial statements:

- give a true and fair view of the assets, liabilities and financial position of the company as at 31 December 2019 and of its profit for the year then ended;
- have been properly prepared in accordance with Irish Generally Accepted Accounting Practice; and
- have been properly prepared in accordance with the requirements of the Companies Act 2014.

Basis for opinion

We conducted our audit in accordance with International Standards on Auditing (Ireland) (ISAs (Ireland)) and applicable law. Our responsibilities under those standards are further described in the Auditor's Responsibilities for the Audit of the Financial Statements section of our report. We are independent of the Company in accordance with ethical requirements that are relevant to our audit of financial statements in Ireland, including the Ethical Standard issued by the Irish Auditing and Accounting Supervisory Authority (IAASA), and we have fulfilled our other ethical responsibilities in accordance with these requirements.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our opinion.

Conclusions relating to going concern

We have nothing to report in respect of the following matters, in relation to which ISAs (Ireland) require us to report to you where:

- the directors' use of the going concern basis of accounting in the preparation of the financial statements is not appropriate; or
- the directors have not disclosed in the financial statements any identified material uncertainties that may cast significant doubt about the Company's ability to continue to adopt the going concern basis of accounting for a period of at least twelve months from the date when the financial statements are authorised for issue.

INDEPENDENT AUDITOR'S REPORT TO THE MEMBERS OF GOOGLE IRELAND HOLDINGS UNLIMITED COMPANY (continued)

Other information

The directors are responsible for the other information. The other information comprises the information included in the Directors' Report other than the financial statements and our auditor's report thereon. Our opinion on the financial statements does not cover the other information and, except to the extent otherwise explicitly stated in our report, we do not express any form of assurance conclusion thereon.

In connection with our audit of the financial statements, our responsibility is to read the other information and, in doing so, consider whether the other information is materially inconsistent with the financial statements or our knowledge obtained in the audit or otherwise appears to be materially misstated. If we identify such material inconsistencies or apparent material misstatements, we are required to determine whether there is a material misstatement in the financial statements or a material misstatement of the other information. If, based on the work we have performed, we conclude that there is a material misstatement of this other information, we are required to report that fact.

We have nothing to report in this regard.

Opinions on other matters prescribed by the Companies Act 2014

Based solely on the work undertaken in the course of the audit, we report that:

- in our opinion, the information given in the directors' report is consistent with the financial statements; and
- in our opinion, the directors' report has been prepared in accordance with the Companies Act 2014.

We have obtained all the information and explanations which we consider necessary for the purposes of our audit.

In our opinion the accounting records of the Company were sufficient to permit the financial statements to be readily and properly audited and the financial statements are in agreement with the accounting records.

Matters on which we are required to report by exception

Based on the knowledge and understanding of the company and its environment obtained in the course of the audit, we have not identified material misstatements in the directors' report.

The Companies Act 2014 requires us to report to you if, in our opinion, the disclosures of directors' remuneration and transactions required by sections 305 to 312 of the Act are not made. We have nothing to report in this regard.

Building a better working world

INDEPENDENT AUDITOR'S REPORT TO THE MEMBERS OF GOOGLE IRELAND HOLDINGS UNLIMITED COMPANY (continued)

Respective responsibilities

Responsibilities of directors for the financial statements

As explained more fully in the directors' responsibilities statement set out on page 6, the directors are responsible for the preparation of the financial statements and for being satisfied that they give a true and fair view, and for such internal control as they determine is necessary to enable the preparation of financial statements that are free from material misstatement, whether due to fraud or error.

In preparing the financial statements, the directors are responsible for assessing the Company's ability to continue as a going concern, disclosing, as applicable, matters related to going concern and using the going concern basis of accounting unless management either intends to liquidate the Company or to cease operations, or has no realistic alternative but to do so.

Auditor's responsibilities for the audit of the financial statements

Our objectives are to obtain reasonable assurance about whether the financial statements as a whole are free from material misstatement, whether due to fraud or error, and to issue an auditor's report that includes our opinion. Reasonable assurance is a high level of assurance, but is not a guarantee that an audit conducted in accordance with ISAs (Ireland) will always detect a material misstatement when it exists. Misstatements can arise from fraud or error and are considered material if, individually or in the aggregate, they could reasonably be expected to influence the economic decisions of users taken on the basis of these financial statements.

A further description of our responsibilities for the audit of the financial statements is located on the IAASA's website at: http://www.iaasa.ie/getmedia/b2389013-1cf6-458b-9b8f-a98202dc9c3a/Description_of_auditors_responsibilities_for_audit.pdf .

This description forms part of our auditor's report.

The purpose of our audit work and to whom we owe our responsibilities

Our report is made solely to the Company's members, as a body, in accordance with section 391 of the Companies Act 2014. Our audit work has been undertaken so that we might state to the Company's members those matters we are required to state to them in an auditor's report and for no other purpose. To the fullest extent permitted by law, we do not accept or assume responsibility to anyone other than the Company and the Company's members, as a body, for our audit work, for this report, or for the opinions we have formed.

Tara Lillywhite
for and on behalf of
Ernst & Young Chartered Accountants and Statutory Audit Firm
Dublin
10 December 2020

STATEMENT OF PROFIT AND LOSS AND OTHER COMPREHENSIVE INCOME
For the Year Ended 31 December 2019

	Notes	2019 US$'000	2018 US$'000
Turnover	5	26,520,387	25,739,671
Cost of sales		(87,288)	(107,512)
Gross profit		26,433,099	25,632,159
Administration expenses		(14,123,435)	(11,122,456)
Other operating income	6	38,698	-
Other operating expenses	6	(1,280)	(55,628)
Operating profit	6	12,347,082	14,454,075
Income from shares in group undertakings		597,505	2,907
Interest receivable and similar income	7	766,791	1,074,919
Interest payable and similar expenses	8	(520)	(14,567)
Profit on ordinary activities before taxation		13,710,858	15,517,334
Tax on profit on ordinary activities	9	-	-
Profit for the financial year		13,710,858	15,517,334
Other comprehensive income:			
Items that may be reclassified to the profit or loss in subsequent years:			
Change in fair value of debt securities	19	713,778	(319,857)
Total comprehensive income for the year		14,424,636	15,197,477

Turnover, expenses and profit for the financial year arose from discontinued operations and are entirely attributable to the owners of the parent.

The notes on pages 13 to 30 form an integral part of these financial statements.

STATEMENT OF FINANCIAL POSITION
As at 31 December 2019

	Notes	2019 US$'000	2018 US$'000
Fixed assets			
Intangible assets	11	-	232,239
Financial assets	12	158,931	9,358,260
		158,931	9,590,499
Current assets			
Debtors: amounts falling due within one year	13	913,807	7,466,592
Debtors: amounts falling due after more than one year	13	-	2,467
Cash and cash equivalents	14	82	502,764
Investments	16	770	43,831,418
Total current assets		914,659	51,803,241
Creditors: amounts falling due within one year	17	(948,376)	(676,784)
Net current (liabilities)/assets		(33,717)	51,126,457
Total assets less current liabilities		125,214	60,716,956
Creditors: amounts falling after more than one year	18	(647,978)	-
Provisions for liabilities		-	(253,445)
Net (liabilities)/assets		(522,764)	60,463,511
Capital and reserves			
Called up share capital presented as equity	19	-	-
Share premium	19	481,062	481,062
Fair value reserve	19	-	(665,186)
Capital contribution	19	1,017,993	1,017,993
Profit and loss account		(2,021,819)	59,629,642
Total shareholders' (deficit)/funds		(522,764)	60,463,511

This report was approved by the Board and signed on its behalf.

Damon Richardson

Damon Richardson

Director

Date: 9 December 2020

Tom Hutchinson

Thomas Hutchinson

Director

Date: 9 December 2020

The notes on pages 13 to 30 form an integral part of these financial statements.

STATEMENT OF CHANGES IN EQUITY
Financial Year Ended 31 December 2019

	Called up share capital presented as equity	Share premium	Capital contribution	Fair value reserve	Profit and loss account	Total equity
	US$'000	US$'000	US$'000	US$'000	US$'000	US$'000
At 1 January 2018	-	481,062	1,017,993	(345,329)	66,962,995	68,116,721
Profit for the financial year	-	-	-	-	15,517,334	15,517,334
Loss on financial assets held at fair value	-	-	-	(319,857)	-	(319,857)
Dividends and distributions paid (note 10)	-	-	-	-	(22,850,687)	(22,850,687)
At 31 December 2018	-	481,062	1,017,993	(665,186)	59,629,642	60,463,511
At 1 January 2019	-	481,062	1,017,993	(665,186)	59,629,642	60,463,511
Profit for the financial year	-	-	-	-	13,710,858	13,710,858
Gain on financial assets held at fair value	-	-	-	713,778	-	713,778
Dividends and distributions paid (note 10)	-	-	-	-	(75,410,911)	(75,410,911)
Transfer between reserves	-	-	-	(48,592)	48,592	-
At 31 December 2019	-	481,062	1,017,993	-	(2,021,819)	(522,764)

The notes on pages 13 to 30 form an integral part of these financial statements.

NOTES TO THE FINANCIAL STATEMENTS

1 General information

Google Ireland Holdings Unlimited Company (the "Company") is a private unlimited company domiciled in Bermuda and incorporated in the Republic of Ireland. The Company's registered number is 369511 and registered office is 70 Sir John Rogerson's Quay, Dublin 2, Ireland.

The financial statements of the Company for the financial year ended 31 December 2019 were authorised for issue in accordance with a resolution of the Directors dated 9 December 2020

The Company's ultimate holding company is Alphabet Inc., a company incorporated in the United States of America, while its immediate holding company is Google APAC Technology Pte. Ltd, a company incorporated in Singapore. Related companies in these financial statements refer to the group of companies under the Alphabet Inc. group.

The financial statements present the information about the Company as an individual entity and not about the group. The Company is exempt from preparing consolidated financial statements under the conditions laid down in Regulation 8 of the European Communities (Companies: Group Accounts) Regulation 1992 and under Section 300 of the Companies Act 2014. The Company is included in the consolidated financial statements of Alphabet Inc, which are publicly available. Those accounts have been prepared in a manner equivalent to consolidated accounts drawn up in accordance with the provisions of the Seventh Directive (83/349EEC).

Up to November 2019 the activities of the Company were that of a holding, management, trading investment and intellectual property licencing company. From December 2019, the principal activities of the Company were that of a holding company only.

2 Statement of compliance

The financial statements have been prepared in accordance with Financial Reporting Standard 101, 'Reduced Disclosure Framework' ("FRS 101") Irish generally accepted accounting practice, and in accordance with the Companies Act 2014.

3 Accounting policies

The significant accounting policies used in the preparation of the entity financial statements are set out below. These policies have been consistently applied to financial years presented, unless otherwise stated.

(a) Basis of preparation of financial statements

The financial statements are prepared on a going concern basis under the historical cost convention, except for certain financial instruments that are classified and measured at fair value (including derivatives and equity securities) as disclosed in the accounting policies below.

The directors of the Company have received written assurances from a fellow group undertaking, Google LLC, that it will continue to provide adequate financial support to the Company for a period of at least twelve months from the date of approval of these financial statements to enable the Company to discharge its financial obligations to all creditors as they fall due. On this basis, the directors are satisfied that it is appropriate to prepare the financial statements on a going concern basis.

The financial statements were prepared in US Dollar ("US$") and all amounts have been rounded to the nearest thousand, unless otherwise indicated.

FRS 101 sets out a reduced disclosure framework for a 'qualifying entity' as defined in the standard which addresses the financial reporting requirements and disclosure exemptions in the individual financial statements of qualifying entities that otherwise apply the recognition, measurement and disclosure requirements of EU adopted IFRS. The Company is a qualifying entity for the purposes of FRS 101.

NOTES TO THE FINANCIAL STATEMENTS - continued

3 Accounting policies - continued

(b) Financial Reporting Standard 101 – reduced disclosure exemptions

In accordance with the exemptions available under the reduced disclosure Framework of FRS 101, the Company has availed of the following exemptions in accordance with paragraph 8 of FRS 101 in respect of:

- The requirements of paragraph 38 of IAS 1 "Presentation of Financial Statements" to present comparative information in respect of:
  - paragraph 79(a)(iv) of IAS 1 (a reconciliation of the number of shares outstanding at the beginning and at the end of the period)
  - paragraph 118(e) of IAS 38 "Intangible Assets"
- The requirements of paragraphs 10(d), 16, 38A, 38B-D, 40A-D, 111 and 134 to 136 of IAS 1 "Presentation of Financial Statements"
- The requirements of IAS 7 "Statement of Cash Flows"
- The requirements of paragraphs 30 to 31 of IAS 8 "Accounting Policies, Changes in Accounting Estimates and Errors" (requirement to disclose information when an entity has not applied a new IFRS that has been issued but is not yet effective)
- The requirements of IAS 24 "Related Party Disclosures" to disclose related party transactions entered into between two or more group members and the requirements of paragraph 17 to disclose key management compensation''
- IFRS 7 'Financial Instruments: Disclosures'.
- The requirements of paragraphs 91 to 99 of IFRS 13 "Fair Value Measurement"
- The requirements of the second sentence of paragraph 110 and paragraphs 113(a), 114, 115, 118, 119(a) to (c), 120 to 127 and 129 of IFRS 15, 'Revenue from Contracts with Customers'

The remaining exemptions available under the Framework have not been availed of as they were not applicable to the Company at this time.

The preparation of financial statements in conformity with FRS 101 requires management to exercise judgment in the process of applying the Company's accounting policies and requires the use of accounting estimates and assumptions.

<u>New and amended standards and interpretations effective during 2019</u>

<u>Adoption of IFRS 16 Leases</u>

In January 2016, the IASB issued IFRS 16 Leases. IFRS 16 sets out the principles for the recognition, measurement, presentation and disclosure of leases and supersedes the leasing requirements under IAS 17 Leases, IFRIC 4 Determining whether an Arrangement contains a Lease, SIC-15 Operating Leases-Incentives and SIC-27 Evaluating the Substance of Transactions Involving the Legal Form of a Lease.

From a lessee perspective, IFRS 16 eliminates the classification of leases as either operating leases or finance leases as was required by IAS 17 and, instead, introduces a single lessee accounting model. Applying that model, a lessee is required to recognise a lease liability and right-of-use asset for all leases with a term of more than 12 months (unless the underlying asset is of low value); and depreciate lease assets separately from recording interest on lease liabilities in the income statement.

The Company has adopted IFRS 16 on 1 January 2019. In accordance with the transition provisions of IFRS 16, the Company has chosen to adopt the modified retrospective approach and has not restated comparative information.

The adoption of IFRS 16 has resulted in no impact for the Company and no financial statement line item has been affected at the adoption date 1 January 2019.

NOTES TO THE FINANCIAL STATEMENTS - continued

3 Accounting policies – continued

(c) Foreign currency translation

(i) Functional and presentation currency

The financial statements of the Company's operations are measured using the currency of the primary economic environment in which the Company operates (the “functional currency”). The financial statements are presented in US Dollars (“US$”), which is the Company's functional and presentation currency. All values are presented in US Dollars ("US$") to the nearest thousand except where otherwise indicated.

(ii) Transactions and balances

Transactions in currencies other than the Company’s functional currency (“foreign currency”) are recorded at average month end rates of exchange which approximates the actual rates on the date of the transaction. At each reporting date, monetary items denominated in foreign currencies are retranslated at the rates prevailing on the reporting date. Non-monetary items carried at fair value that are denominated in foreign currencies are retranslated at the rates prevailing on the date when the fair value was determined. Non-monetary items that are measured in terms of historical cost in a foreign currency are not retranslated.

Exchange differences arising on the settlement of monetary items and on translation of monetary items are included in profit or loss for the financial year. Exchange differences arising on the retranslation of non-monetary items carried at fair value are included in profit or loss for the financial year except for differences arising on the retranslation of non-monetary items in respect of which gains and losses are recognised directly in equity. For such non-monetary items, any exchange component of that gain or loss is also recognised directly in equity.

(d) Turnover

The Company recognises revenue when control of the promised goods or services are transferred to the customer, in an amount that reflects the consideration the Company expects to be entitled to in exchange for those goods or services.

Revenues are generated from the licensing of intellectual property to a subsidiary undertaking.

The nature of the promise in granting a licence provides the customer with a right to access licence. The Company assesses the nature of the licence to determine whether the intellectual property provides the customer with a right to use or a right to access intellectual property. In making this determination, the Company considers whether the contract requires, or the customer expects, ongoing activities to be performed that significantly affect the intellectual property, whether such activities expose the customer to any negative or positive effects, and whether such activities result in the transfer of a good or service.

The Company recognises revenue as a performance obligation satisfied over time, because the customer will simultaneously receive and consume the benefit from the entity's performance of providing access to its intellectual property, as the performance occurs. The transaction price is an amount that reflects the consideration the Company expects to be entitled to in exchange for those goods or services.

(e) Interest receivable and similar income

Interest receivable comprises interest receivable on cash at bank and bank deposits and other short-term highly liquid investments calculated using the effective interest rate method and interest on loans receivable from group undertakings and is recognised in the statement of comprehensive income.

(f) Interest payable and similar expenses

Interest payable generally comprises interest payable on loans to group undertakings and is recognised in the statement of comprehensive income.

NOTES TO THE FINANCIAL STATEMENTS - continued

3 Accounting policies – continued

(g) Intangible assets

Intangible assets are measured at cost less accumulated amortisation (less accumulated impairment, if any).

The useful lives of intangible assets are assessed as finite and are amortised over the useful economic life. The amortisation period and the amortisation method for an intangible asset with a finite useful life are reviewed at least at the end of each reporting period. Exclusive licenses are capitalised as intangible assets and are amortised on a straight-line basis over their estimated useful lives of 6 years. Patents and developed technology and tradenames are amortised on a straight-line basis over their estimated useful lives of 2-9 years. The amortisation expense on intangible assets with finite lives is recognised in the profit or loss as part of administration expenses.

The amortisation period and the amortisation method for an intangible asset with a finite useful life, as well as any impairment considerations, are reviewed at least at the end of each reporting period.

Intangible assets are classified as held for sale when their carrying amount is to be recovered principally through a sale transaction and a sale is considered highly probable. They are stated at the lower of carrying amount and fair value less costs to sell.

(h) Goodwill

Goodwill is initially measured at cost. After initial recognition, goodwill is measured at cost less any accumulated impairment losses.

The Irish Companies Act 2014 requires goodwill to be reduced by provisions for depreciation on a systematic basis over a period chosen by the directors, its useful economic life. However, under IFRS 3 Business Combinations, goodwill is not amortised. Consequently, the Company does not amortise goodwill, but reviews it for impairment on an annual basis or whenever there are indicators of impairment. The Company is therefore invoking a 'true and fair view override' to overcome the prohibition on the non-amortisation of goodwill in the Companies Act. The Company is not able to reliably estimate the impact on the financial statements of the true and fair override on the basis that the useful life of goodwill cannot be predicted with a satisfactory level of reliability, nor can the pattern in which goodwill diminishes be known.

For the purpose of impairment testing, goodwill acquired in a business combination is allocated to each of the Company's Cash Generating Units (CGUs) which are expected to benefit from the combination. Each unit to which the goodwill is allocated represents the lowest level within the entity at which the goodwill is monitored for internal management purposes. Goodwill is tested for impairment annually and when circumstances indicate that the carrying value may be impaired. Impairment is assessed by comparing the carrying value of an asset with its recoverable amount.

The recoverable amount is determined based on value-in-use calculations. The use of this method requires the estimation of future cash flows and the determination of a discount rate in order to calculate the present value of the cash flows.

(i) Research and development

Research costs are expensed in the period in which they are incurred. The Company currently incurs no development costs which would meet the criteria for capitalisation as development expenditure under IAS 38.

(j) Financial fixed assets

Investments in subsidiaries and joint venture undertakings are measured at cost less accumulated impairment losses. The Company tests for impairment when circumstances indicate that the carrying value may be impaired. Impairment is assessed by comparing the carrying value of an asset with its recoverable amount, which is the higher of net realisable value or value-in-use.

NOTES TO THE FINANCIAL STATEMENTS - continued

3 Accounting policies – continued

(j) Financial fixed assets – continued

Loans receivable from group undertakings falling due after more than one year are also presented under financial assets. The classification and recognition criteria for loans receivable from group undertakings falling due after more than one year are disclosed in note (k).

(k) Financial assets

Financial assets are recognised in the statement of financial position when, and only when, the Company becomes a party to the contractual provisions of the financial instrument.

When financial assets are recognised initially, they are measured at fair value, plus, in the case of financial assets not at fair value through profit or loss (‘FVTPL’), directly attributable transaction costs.

A financial asset is derecognised where the contractual right to receive cash flows from the asset has expired or have been transferred and the Company has transferred substantially all risks and rewards of ownership.

On derecognition of a financial asset in its entirety, except for those subsequently measured at fair value through other comprehensive income (‘FVTOCI’), the difference between the carrying amount and the sum of the consideration received and any cumulative gain or loss that has been recognised directly in equity is recognised in profit or loss. For derecognition of financial assets measured at FVTOCI, any cumulative gain or loss is recognised in other comprehensive income.

All regular way purchases and sales of financial assets are recognised or derecognised on the trade date i.e. the date that the Company commits to purchase or sell the asset. Regular way purchases or sales are purchases or sales of financial assets that require delivery of assets within the period generally established by regulation or convention in the marketplace concerned.

Classification and measurement

The Company classifies its financial assets in the following measurement categories:

- those to be measured subsequently at fair value (either FVTOCI or FVTPL), and
- those to be measured at amortised cost.

A financial asset is measured at amortised cost if it has not been designated as FVTPL and meets both of the following conditions:

- it is held within a business model whose objective is to hold to collect contractual cash flow; and
- its contractual terms give rise on specified dates to cash flows that are solely payments of principal and interest on the principal amount outstanding.

A financial asset is measured at FVTOCI if it has not been designated as FVTPL and meets both of the following conditions:

- it is held within a business model whose objective is both to hold to collect contractual cash flow and sell financial assets and;
- its contractual terms give rise on specified dates to cash flows that are solely payments of principal and interest on the principal amount outstanding.

On initial recognition of an equity investment that is not held for trading, the Company can make an irrevocable election to present subsequent changes in the investments as FVTOCI. This election is made on an investment by investment basis. The Company has elected not to avail of this exemption and instead measures equity investments at FVTPL and records all fair value movements on equity investments through profit and loss.

NOTES TO THE FINANCIAL STATEMENTS - continued

3 Accounting policies – continued

(k) Financial assets - continued

Financial assets held at FVTPL

The Company enters into foreign currency contracts with financial institutions to reduce the risk that cash flows and earnings will be adversely affected by foreign currency exchange rate fluctuations. The Company's program is not designated for trading or speculative purposes.

Derivative financial instruments are initially recognised at fair value on the date on which a derivative contract is entered into and are subsequently remeasured at fair value. The fair value of forward currency contracts is calculated by reference to current forward exchange rates for contracts with similar maturity profiles.

Debt instruments

Subsequent measurement of debt instruments depends on the entity’s business model for managing the asset and the cash flow characteristics of the asset. All the Company’s debt instruments are measured at amortised cost as the assets that are held for collection of contractual cash flows where those cash flows represent solely payments of principal and interest are measured at amortised cost.

A gain or loss on a debt investment that is subsequently measured at amortised cost and is not part of a hedging relationship is recognised in profit or loss when the asset is derecognised or impaired. Interest income from these financial assets is included in finance income using the effective interest rate method.

The Company’s debt instruments consist of the following:

- Loans and debtors with group undertakings
- Other debtors

Impairment of debt instruments measured at amortised cost

For intercompany trade debtors, the entity applies the simplified approach permitted by IFRS 9, which requires expected lifetime losses to be recognised from initial recognition of the debtors.

To measure the expected credit losses, intercompany trade debtors have been grouped based on shared credit risk characteristics. The Company uses judgement in making assumptions around the risk of default and expected loss rates, based on the Company’s past history, existing market conditions as well as forward looking estimates at the end of each reporting period.

For loans owed from group undertakings, the Company applies the general approach to providing for expected credit losses, as prescribed by IFRS 9. The general expected credit loss model under IFRS 9 requires the calculation of ‘12 month expected credit losses’ (losses based on defaults which are possible within 12 months of the reporting date) for financial assets, unless the asset at the reporting date is not considered to be ‘low credit risk’ and is deemed to have had a ‘significant increase in credit risk’ since initial recognition, in which case lifetime expected credit losses should be recorded.

Management consider amounts due from group undertakings to have ‘low credit risk’ when they have a low risk of default and the issuer has a strong capacity to meet its contractual cash flow obligations in the short term.

Debt Instruments at FVTOCI

Assets that are held for collection of contractual cash flows and for selling the financial assets, where the assets’ cash flows represent solely payments of principal and interest, are measured at FVTOCI.

Movements in the carrying amount are taken through other comprehensive income (’’OCI’’), except for the recognition of impairment gains or losses, interest revenue and foreign exchange gains and losses which are recognised in profit or loss.

NOTES TO THE FINANCIAL STATEMENTS - continued

3 Accounting policies – continued

(k) Financial assets – continued

When the financial asset is derecognised, the cumulative gain or loss previously recognised in OCI is reclassified from equity to profit or loss and recognised in other income and expenses. Interest income from these financial assets is included in finance income using the effective interest rate method. Foreign exchange gains and losses are presented in other income and expenses and impairment expenses in other expenses.

Debt Instruments at FVTPL

Assets that do not meet the criteria for amortised cost or FVOCI are measured at FVTPL. A gain or loss on a debt investment that is subsequently measured at fair value through profit or loss and is not part of a hedging relationship is recognised in profit or loss and presented net in the statement of profit or loss within other income and expenses in the period in which it arises.

The Company measures debt instruments as follows:

- Debt securities (investments in government bonds, corporate and mortgage backed securities) are classified as FVTOCI
- Money market funds are classified as FVTPL

Impairment of debt investments measured at FVTOCI

The Company applies the general approach to providing for expected credit losses prescribed by IFRS 9 for assets held at FVOCI. The general expected credit loss model requires the calculation of ‘12 month expected credit losses’ (losses based on defaults which are possible within 12 months of the reporting date) for financial assets, unless the asset is not considered to be of ‘low credit risk at the reporting date and is deemed to have had a ‘significant increase in credit risk’ since initial recognition, in which case lifetime expected credit losses should be recorded.

(l) Financial liabilities

Financial liabilities are recognised in the statement of financial position when, and only when, the Company becomes a party to the contractual provisions of the financial instrument.

Financial liabilities are recognised initially at fair value, plus, in the case of financial liabilities other than derivatives, directly attributable transaction costs.

Subsequent to initial recognition, all financial liabilities are measured at amortised cost using the effective interest method, except for derivatives, which are measured at fair value.

A financial liability is derecognised when the obligation under the liability is extinguished. For financial liabilities other than derivatives, gains and losses are recognised in profit or loss when the liabilities are derecognised, and through the amortisation process.

The Company contains the following categories of financial liabilities:

- Financial liabilities held at amortised cost
- Financial liabilities held at FVTPL

The classification depends on the purpose for which the financial liabilities were acquired. Management determines the classification of its financial liabilities at initial recognition.

(i) Financial liabilities held at amortised cost

Financial liabilities at amortised cost are included in ‘Creditors: amounts falling due within one year’ and ‘Creditors: amounts falling due after more than one year’ in the statement of financial position.

NOTES TO THE FINANCIAL STATEMENTS - continued

3 Accounting policies – continued

(l) Financial liabilities – continued

(i) Financial liabilities held at amortised cost – continued

Creditors are classified as current liabilities, unless the Company has an unconditional right to defer settlement of the liability for at least 12 months after the balance sheet date.

Interest expense relating to the financial liability is recognised in profit or loss on a time proportion basis using the effective interest rate method.

(ii) Financial liabilities held at FVTPL

The Company enters into foreign currency contracts with financial institutions to reduce the risk that cash flows and earnings will be adversely affected by foreign currency exchange rate fluctuations. The Company's program is not designated for trading or speculative purposes.

Derivative financial instruments are initially recognised at fair value on the date on which a derivative contract is entered into and are subsequently remeasured at fair value. The fair value of forward currency contracts is calculated by reference to current forward exchange rates for contracts with similar maturity profiles.

Derivative financial liabilities are included as:
- Creditors: amounts falling due within one year

The Company participates in an intra group cash pooling program, which involves the transfer of cash amounts and bank overdrafts to an intra group cash pooling entity. The amounts owed to the cash pooling entity are classified as "Amounts owed to fellow group undertakings" (Note 17) and measured at amortised cost.

(m) Offsetting of financial instruments

Financial assets and financial liabilities are offset and the net amount is reported in the statement of financial position if there is a currently enforceable legal right to offset the recognised amounts and there is an intention to settle on a net basis, to realise the assets and settle the liabilities simultaneously.

(n) Equity instruments issued

An equity instrument is any contract that evidences a residual interest in the assets of the Company after deducting all of its liabilities.

Ordinary shares are classified as equity and recognised at the fair value of the consideration received by the Company. Incremental costs directly attributable to the issuance of new shares are shown in the equity as a reduction from the proceeds.

(o) Cash and cash equivalents

Cash and cash equivalents includes cash in hand, deposits held at call with banks, other short term highly liquid investments with original maturities of three months or less that are subject to an insignificant risk of changes in value.

The Company participates in an intergroup cash pooling programme, which involves the transfer of cash amounts and bank overdrafts to an intergroup cash pooling entity. The amounts placed with the cash pooling entity are classified as “Amounts owed to fellow group undertakings” (Note 17).

(p) Provisions for liabilities

Provisions are recognised when the Company has a present obligation (legal or constructive) as a result of a past event, it is probable that an outflow of economic resources will be required to settle the obligation and the amount of the obligation can be estimated reliably.

Provisions are reviewed at each reporting date and adjusted to reflect the current best estimate. If it is no longer probable that an outflow of economic resources will be required to settle the obligation, the provision is reversed.

NOTES TO THE FINANCIAL STATEMENTS - continued

3 Accounting policies – continued

(p) Provisions for liabilities – continued

Provisions are measured at the present value of management's best estimate of the expenditure required to settle the present obligation at the reporting date. The discount rate used to determine the present value reflects current market assessments of the time value of money and the risks specific to the liability. Where discounting is used, the increase in the provision due to the passage of time is recognised as an interest expense.

Where the Company expects some or all of a provision to be reimbursed, the reimbursement is recognised as a separate asset but only when recovery is virtually certain. The expense relating to any provision is presented in the income statement net of any reimbursement.

(q) Dividends and distributions

Dividends and distributions are recognised when they become legally payable. Interim dividends and distributions are recognised when paid. Dividend income is recognised when the Company's right to receive payment is established.

4 Critical accounting estimates and judgements

Critical accounting estimates and judgements

In the process of applying the Company's accounting policies, management is of the opinion that there are no critical judgements involved that have a significant effect on the amounts recognised in the financial statements other than stated below.

Key sources of estimation uncertainty

The key assumptions concerning the future, and other key sources of estimation uncertainty at the reporting date, that have a significant risk of causing a material adjustment to the carrying amounts of assets and liabilities and the reported amounts of revenue and expenses within the next financial year are discussed below:

Financial assets

The carrying values of financial assets are reviewed annually. See note 12 for the carrying amount of the investments in subsidiaries and loans receivable. Financial assets are reviewed for impairment whenever events or changes in circumstances indicate that the carrying amount of an asset may not be recoverable.

5 Turnover

Turnover represents royalty income from the licensing of intellectual property to a subsidiary undertaking.

An analysis of turnover is not disclosed in line with Schedule 3 of the Companies Act 2014.

6 Profit on ordinary activities before taxation

	2019 US$'000	2018 US$'000
The profit on ordinary activities before taxation is stated after charging/ (crediting):		
Research and development expenditure	10,411,517	9,575,338
Amortisation of intangible assets	81,539	84,622
Impairment of investment in subsidiary	67,042	8,189
Foreign exchange losses	51,403	275,889
(Gain)/loss on disposal of short-term investments	(38,698)	55,628
Fair value movement on foreign currency derivative contracts	(233,349)	(134,391)

NOTES TO THE FINANCIAL STATEMENTS - continued

6 Profit on ordinary activities before taxation - continued

The Company has no employees (2018: None). The directors' remuneration for the year and the prior year was borne by another group undertaking.

Auditor's remuneration is borne by another group undertaking.

7 Interest receivable and similar income

	2019 US$'000	2018 US$'000
Interest income on cash and cash equivalents and short-term investments	682,424	1,010,801
Interest receivable from group undertakings	84,367	64,118
	766,791	1,074,919

8 Interest payable and similar expenses

	2019 US$'000	2018 US$'000
Interest payable to group undertakings	520	14,567
	520	14,567

9 Taxation

No charge to corporation tax arises in the year (2018: US$nil). The Company is domiciled and tax resident in Bermuda where the standard tax rate is 0%.

The Company will become tax resident in Ireland from 1 January 2021.

10 Dividends and distributions

	2019 US$'000	2018 US$'000
Interim dividends and distributions paid in respect of the financial year	75,410,911	22,850,687

In October 2019, the Company received a distribution of intangible assets from a subsidiary undertaking and the Company immediately distributed those intangible assets at its carrying value of nil to its then immediate parent. In November 2019, the Company distributed its intangible assets at carrying value of US$171 million and financial assets at carrying value of US$15.4 billion to its then immediate parent. In December 2019, the Company distributed the majority of its debt security investments at fair value of US$26.7 billion, in addition to net assets amounting to US$3.0 billion to its then immediate parent.

During 2019, the Company also approved and paid dividends and distributions in the amount of US$30.0 billion (2018: US$22.9 billion) to its then immediate parent. The interim dividend and distribution per fully paid up share was US$746.6 million (2018: US$226.2 million).

NOTES TO THE FINANCIAL STATEMENTS - continued

11 Intangible assets

	Goodwill	Patents and development technology	Tradenames and other	Licences	Total
	US$'000	US$'000	US$'000	US$'000	US$'000
Cost					
At 31 December 2018	1,446,652	84,120	71,774	447,759	2,050,305
Additions separately acquired	-	19,743	157	-	19,900
Disposals	(1,446,652)	(103,863)	(71,931)	(447,759)	(2,070,205)
At 31 December 2019	-	-	-	-	-
Accumulated amortisation					
At 31 December 2018	1,309,101	63,340	69,382	376,243	1,818,066
Amortisation charge	-	12,285	1,676	67,578	81,539
Disposals	(1,309,101)	(75,625)	(71,058)	(443,821)	(1,899,605)
At 31 December 2019	-	-	-	-	-
Net book value					
At 31 December 2019	-	-	-	-	-
At 31 December 2018	137,551	20,780	2,392	71,516	232,239

During the period the Company distributed intangible assets with a carrying value of US$171 million to its then immediate parent.

12 Financial assets

	2019	2018
	US$'000	US$'000
Investment in subsidiaries	67,721	7,145,486
Investment in joint ventures	354	354
Investment in related parties	395	93,673
Financial assets at fair value through profit and loss	90,461	-
Intercompany loans receivable	-	2,118,747
	158,931	9,358,260

NOTES TO THE FINANCIAL STATEMENTS - continued

12 Financial assets - continued

Note (i) – investments in subsidiaries, joint ventures, related parties, financial assets at fair value through profit and loss and intercompany loan receivable

	Investment in subsidiaries US$'000	Investment in joint venture US$'000	Investment in related parties US$'000	Financial assets at fair value through profit and loss US$'000	Intercompany loan receivable US$'000	Total US$'000
Cost or valuation						
At 1 January 2019	7,716,538	354	93,673	-	2,118,747	9,929,312
Reclassification to financial assets at fair value through profit and loss	-	-	(88,593)	88,593	-	-
Loans advanced	-	-	-	-	127,987	127,987
Additions	8,401,854	-	387	1,868	-	8,404,109
Disposals	(15,923,050)	-	(5,072)	-	-	(15,928,122)
Loan interest	-	-	-	-	49,667	49,667
Revaluations	-	-	-	-	(2,210)	(2,210)
Loans repaid or reclassified to current assets	-	-	-	-	(2,294,191)	(2,294,191)
At 31 December 2019	195,342	354	395	90,461	-	286,552
Impairment						
At 1 January 2019	571,052	-	-	-	-	571,052
Impairment charge	67,042	-	-	-	-	67,042
Disposals	(510,473)	-	-	-	-	(510,473)
At 31 December 2019	127,621	-	-	-	-	127,621
Net book value						
At 31 December 2019	67,721	354	395	90,461	-	158,931
At 31 December 2018	7,145,486	354	93,673	-	2,118,747	9,358,260

(a) Intercompany loans receivable

Intercompany loans amounting to US$nil (2018: US$2.1 billion) are due to the Company from subsidiary undertakings.

NOTES TO THE FINANCIAL STATEMENTS - continued

12 Financial assets - continued

(b) Additions
During the year, the Company made capital contributions totalling US$8.4 billion to subsidiary undertakings.

(c) Distributions
During the year the Company distributed equity investments with a carrying value of US$15.4 billion to its then immediate parent.

(d) List of subsidiary undertakings
Details of the Company's investments in subsidiaries are outlined below. The Company holds the ordinary share capital in all such investments.

Name	Country of incorporation	Registered office	Holding	Principal activity
Google Netherlands Holdings BV	Netherlands	Claude Debussylaan 34 15th floor 1082 MD Amsterdam	100%	Licensing company
Google Information Technology (Shanghai) Company Limited	People's Republic of China	60F Shanghai World Financial Center 100 Century Avenue Pudong New District Shanghai	100%	Internet search engine company
Google Information Technology (China) Co., Limited (Beijing R&D WFOE)	People's Republic of China	4th,5th, 6th and 7th floor Building 1 No. 2 Kexueyuan South Road Haidian District 5 Beijing, 100190	100%	Software development
Peng Ji Information Technology (Shanghai) Co., Ltd	People's Republic of China	Units 9, 10, and 11 14th floor Building 1 No. 55 Jilong Road Pilot Free Trade Zone Shanghai	100%	Software development
Google Advertising (Shanghai) Company Limited	People's Republic of China	Level 61 Shanghai World Financial Centre 100 Century Avenue Shanghai	100%	Internet advertising
NVF Tech Limited	United Kingdom	5 New Street Square London, EC4A 3TW	100%	Research and development company
Limes Audio AB	Sweden	C/O Baker & McKenzie Advokatbyrå KB Box 180 101 23 Stockholm	100%	Audio conferencing

NOTES TO THE FINANCIAL STATEMENTS - continued

12 Financial assets – continued

(d) List of subsidiary undertakings – continued

Name	Country of incorporation	Registered office	Holding	Principal activity
Moodstocks SAS	France	8 Rue de Londres 75009 Paris	100%	Image recognition
DoubleClick International Asia Holding N.V.	Netherlands	Damacor Office Building Schout bij Nacht Doormanweg 40, 2nd Floor Willemstad, Curaçao Netherlands Antilles	100%	Holding company
Bitspin GmbH	Switzerland	Brandschenkestrasse 110 Zurich, Switzerland, 8002 Zurich	100%	Software development
Nest Labs (Europe) Limited	Ireland	70 Sir John Rogerson's Quay Dublin 2	100%	Home automation
AIMatter OOO	Belarus	Office 825 Suite 5 36-1 Internatsionalnaya Street Minsk 220030 Belarus	100%	Software development
BeatThatQuote.com Limited	United Kingdom	5 New Street Square London, EC4A 3TW	100%	Price comparison
Spidercrunch Limited	United Kingdom	5 New Street Square London, EC4A 3TW	100%	Online service

(e) Joint venture undertaking

Details of the Company’s joint venture investment is outlined below. The Company holds the ordinary share capital in this investment.

Name	Country of incorporation	Registered office	Holding	Principal activity
Beijing Gu Xiang Information Technology Co. Limited	People’s Republic of China	303-306, 3rd floor Building 1 No. 2 Kexueyuan South Road Haidian District Beijing, 100190	50%	Internet search engine company

NOTES TO THE FINANCIAL STATEMENTS - continued

13 Debtors

	2019 US$'000	2018 US$'000
Debtors: amounts falling due after more than one year		
Loan receivable	-	2,467
Debtors: amounts falling due within one year		
Amounts owed by fellow group undertakings	444,166	3,466,374
Amounts owed by subsidiary undertakings	2,848	3,409,469
Other debtors	231,833	375,543
Derivative financial instruments (note 15)	234,960	215,206
	913,807	7,466,592

14 Cash and cash equivalents

	2019 US$'000	2018 US$'000
Cash at bank	82	502,764
	82	502,764

Cash and cash equivalents are held with banks and financial institution counterparties which are rated investment grade by external credit rating agencies and are considered to have low credit risk. The maximum maturity of cash and cash equivalents is 3 months. Short term investments are readily convertible to known amounts of cash and are subject to an insignificant risk of changes in value.

During 2019, the Company began participating in an intra group cash pooling programme. Please see Note 17 for further information.

15 Derivative financial instruments

	2019 US$'000	2018 US$'000
Assets:		
Foreign currency derivative contracts	234,960	215,206
Liabilities:		
Foreign currency derivative contracts	2,718	-

Derivative financial instruments are measured at fair value through profit or loss. Fair value gains and losses were recognised in administrative expenses. The fair value of forward currency contracts has been determined using quoted forward exchange rates matching the maturity of the contracts.

NOTES TO THE FINANCIAL STATEMENTS - continued

16 Investments	2019 US$'000	2018 US$'000
Investments in marketable securities	770	43,831,418

Marketable securities are primarily comprised of highly liquid debt instruments of the U.S. government and its agencies, municipalities in the U.S., debt instruments issued by foreign governments, corporate securities and mortgage-backed securities. These investments are measured at fair value through other comprehensive income.

During the period, the Company realised investments of US$17.1 billion through maturities, interest receipts and the sale of securities in the normal course of operations. In December 2019, the Company distributed investments with a fair value of US$26.7 billion to its then immediate parent.

17 Creditors: amounts falling due within one year	2019 US$'000	2018 US$'000
Amounts owed to fellow group undertakings	1,400	341,587
Amounts owed to subsidiary undertakings	710,402	142,602
Other creditors	231,765	171,948
Accruals	2,091	20,647
Derivative financial instruments (note 15)	2,718	-
	948,376	676,784

Amounts owed to fellow group and subsidiary undertakings include intercompany trade creditors of US$712million (2018: US$452 million) that are unsecured, interest free and repayable on demand and intercompany loans of US$nil (2018: US$32 million).

The ‘Amounts owed to fellow group undertakings’ include amounts of US$61 that arise as a result of the Company’s participation in an intra group cash pooling programme. This programme was initiated in 2019. The programme involves the transfer of cash amounts that the Company had previously held with external banks (or an external bank overdraft) and positions that were previously held with related parties, to an intra group cash pooling entity, as part of the efficient management of cash and related party balances within the wider group. Prior to this, the Company held its cash positions directly with an external banking provider (including bank overdrafts), and as a result had classified these balances as cash and cash equivalents or bank overdrafts with an external bank. These amounts are unsecured, interest bearing and repayable on demand.

18 Creditors: amounts falling due after more than one year	2019 US$'000	2018 US$'000
Other creditors	647,978	-
	647,978	-

The above amount relates to tax payable which has arisen as a result of tax legislation introduced in 2019 which the Company is subject to due to the nature of its principal activity up to November 2019. The amount is due for payment in 2021.

NOTES TO THE FINANCIAL STATEMENTS - continued

19 Equity and reserves

a) Share capital presented as equity

	2019 €	2018 €
Authorised		
1,000,000 ordinary shares of €1 each	1,000,000	1,000,000
100 series "A" ordinary shares of €1 each	100	100
	1,000,100	1,000,100
Allotted, called up and fully paid		
100 ordinary shares of €1 each	100	100
1 series "A" ordinary shares of €1 each	1	1
	101	101

The ordinary shares and series "A" ordinary shares rank pari passu in all respects save that on a return of assets on liquidation or otherwise the assets of the Company available for distribution among the members shall be applied first in repaying to the holders of the ordinary shares the amounts paid up or credited as paid up on such shares, and second in repaying to the holders of the series "A" ordinary shares the amounts paid up or credited as paid upon such shares and the balance of such assets.

There were no movements in the Company's ordinary shares or series "A" ordinary shares during the year (2018: None).

b) Share premium

This reserve records premiums received by the immediate holding company which are in excess of the nominal value of the equity shares issued. There were no movements in the Company’s share premium reserve during the year (2018: none).

c) Fair value reserve

The fair value reserve reflects changes in the fair value of investments held at fair value through other comprehensive income, with unrealised gains or losses recognised in other comprehensive income. On sale of the investments these gains and losses will be recycled to profit or loss.

During the year, an unrealised gain (2018: loss) was recognised as other comprehensive income due to the remeasurement of these investments to fair value, amounting to US$714 million (2018: US$320 million loss).

d) Capital contribution

Capital contributions represent money or assets contributed to the Company by its parent.

20 Parent and Ultimate controlling party

At 31 December 2019, the Company was a wholly owned subsidiary of Google APAC Technology Pte. Ltd, a company incorporated in Singapore.

The ultimate holding company and ultimate controlling party is Alphabet Inc., a company incorporated in the United States of America. The ultimate holding company and controlling party Alphabet Inc. is the smallest and largest group into which these financial statements are consolidated. The consolidated financial statements are available to the public and may be obtained from 1600 Amphitheatre Parkway, Mountain View, CA 94043, United States of America or can be obtained from the investor relations website at http://investor.google.com/.

NOTES TO THE FINANCIAL STATEMENTS - continued

20 Parent and Ultimate controlling party - continued

All transactions recorded in the period with related entities are shown in notes 5, 6, 7, 8, 10, 12, 13, 16 and 17. The Company has taken advantage of the exemption under paragraph 8(k) of FRS 101 not to disclose transactions with fellow wholly owned subsidiaries of Alphabet Inc.

21 Contingent liabilities

Contingent liabilities exist, but are not recognised in the financial statements, as a transfer of economic benefits is not considered probable or the amount of any economic benefit to be transferred cannot be reliably estimated. Such contingencies include additional intercompany charges and other operating costs in connection with the Company's ordinary activities to which the Company believes that there is a possible, but not probable, obligation in relation to these matters, or where the amount of any economic benefit to be transferred cannot be reliably estimated.

22 Post balance sheet events

There were no material post balance sheet events that require adjustment to or disclosure in the financial statements.

23 Related party transactions

The Company has availed of the exemption under paragraph 8(k) of FRS101 not to disclose transactions with wholly owned subsidiaries of the Alphabet Inc. group.

At 1 January 2019 the Company had a receivable balance of US$133,471, owed from its related party, Verily Ireland Limited. During the year, this balance was settled in full to the Company and at 31 December 2019, the Company has no intercompany balances with its related party, Verily Ireland Limited.

24 Approval of the financial statements

The board of directors approved these financial statements for issue on 9 December 2020.

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

FORM 10-K

(Mark One)

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

For the fiscal year ended December 31, 2019
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 No.)

1600 Amphitheatre Parkway
Mountain View, CA 94043
(Address of principal executive offices, including zip code)
(650) 253-000
(Registrant's telephone number, including)

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

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

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

Title of each class
None

Indicate by check mark if the registrant is a well-known seasoned issuer, as defined in Rule 405 of the Securities Act. Yes ☒ No ☐

Indicate by check mark if the registrant is not required to file reports pursuant to Section 13 or Section 15(d) of the Act. Yes ☐ No ☒

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

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

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

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

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

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

As of June 28, 2019, the aggregate market value of shares held by non-affiliates of the registrant (based upon the closing sale prices of such shares on the Nasdaq Global Select Market on June 28, 2019) was approximately $663.0 billion. For purposes of calculating the aggregate market value of shares held by non-affiliates, we have assumed that all outstanding shares are held by non-affiliates, except for shares held by each of our executive officers, directors and 5% or greater stockholders. In the case of 5% or greater stockholders, we have not deemed such stockholders to be affiliates unless there are facts and circumstances which would indicate that such stockholders exercise any control over our company, or unless they hold 10% or more of our outstanding common stock. These assumptions should not be deemed to constitute an admission that all executive officers, directors and 5% or greater stockholders are, in fact, affiliates of our company, or that there are not other persons who may be deemed to be affiliates of our company. Further information concerning shareholdings of our officers, directors and principal stockholders is included or incorporated by reference in Part III, Item 12 of this Annual Report on Form 10-K.

As of January 27, 2020, there were 299,895,185 shares of the registrant's Class A common stock outstanding, 46,411,073 shares of the registrant's Class B common stock outstanding, and 340,979,832 shares of the registrant's Class C capital stock outstanding.

DOCUMENTS INCORPORATED BY REFERENCE

Portions of the registrant's Proxy Statement for the 2020 Annual Meeting of Stockholders are incorporated herein by reference in Part III of this Annual Report on Form 10-K to the extent stated herein. Such proxy statement will be filed with the Securities and Exchange Commission within 120 days of the registrant's fiscal year ended December 31, 2019.

Alphabet Inc.
Form 10-K
For the Fiscal Year Ended December 31, 2019

TABLE OF CONTENTS

NOTE ABOUT FORWARD-LOOKING STATEMENTS

This Annual Report on Form 10-K 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;
- the potential for declines in our revenue growth rate and operating margin;
- our expectation that the shift from an offline to online world will continue to benefit our business;
- our expectation that the portion of our revenues that we derive from non-advertising revenues will continue to increase and may affect our margins;
- our expectation that our traffic acquisition costs (TAC) and the associated TAC rates will fluctuate, which could affect our overall margins;
- our expectation that our monetization trends will fluctuate, which could affect our revenues and margins;
- fluctuations in our revenue growth, as well as the change in paid clicks and cost-per-click on Google properties and the change in impressions and cost-per-impression on Google Network Members' properties, and various factors contributing to such fluctuations;
- our expectation that we will continue to periodically review, refine, and update our methodologies for monitoring, gathering, and counting the number of paid clicks on Google properties and impressions on Google Network Members' properties;
- our expectation that our results will be affected by our performance in international markets as users in developing economies increasingly come online;
- our expectation that our foreign exchange risk management program will not fully offset our net exposure to fluctuations in foreign currency exchange rates;
- the expected variability of gains and losses related to hedging activities under our foreign exchange risk management program;
- the amount and timing of revenue recognition for commitments in customer contracts with performance obligations, which could impact our estimate of the remaining amount of commitments and when we expect to recognize revenue;
- fluctuations in our capital expenditures;
- our plans to continue to invest in new businesses, products, services and technologies, systems, land and buildings for data centers and offices, and infrastructure, to continue to hire aggressively and provide competitive compensation programs, as well as to continue to invest in acquisitions;
- our expectation that our cost of revenues, research and development (R&D) expenses, sales and marketing expenses, and general and administrative expenses will increase in amount and may increase as a percentage of revenues may be affected by a number of factors;
- estimates of our future compensation expenses;
- our expectation that our other income (expense), net (OI&E), will fluctuate in the future, as it is largely driven by market dynamics;
- fluctuations in our effective tax rate;
- seasonal fluctuations in internet usage and advertiser expenditures, underlying business trends such as traditional retail seasonality and macroeconomic conditions, which are likely to cause fluctuations in our quarterly results;
- the sufficiency of our sources of funding;
- our potential exposure in connection with pending investigations, proceedings, and other contingencies;
- the sufficiency and timing of our proposed remedies in response to the European Commission's (EC) and others' decisions;
- our expectations regarding the timing, design and implementation of our new global enterprise resource planning (ERP) system;

- the expected timing and amount of Alphabet Inc.'s share repurchases;
- our long-term sustainability goals;

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: Item 1 "Business," Item 1A "Risk Factors," and Item 7 "Management's Discussion and Analysis of Financial Condition and Results of Operations." 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 Annual Report on Form 10-K, and in particular, the risks discussed in Item 1A, "Risk Factors" of this report 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

ITEM 1. BUSINESS

Overview

As our founders Larry and Sergey wrote in the original founders' letter, "Google is not a conventional company. We do not intend to become one." That unconventional spirit has been a driving force throughout our history — inspiring us to do things like tackling deep computer science problems, such as our investments in artificial intelligence (AI) and quantum computing.

Alphabet is a collection of businesses — the largest of which is Google. We report all non-Google businesses collectively as Other Bets. Our Other Bets include earlier stage technologies that are further afield from our core Google business. We take a long term view and manage the portfolio of Other Bets with the discipline and rigor needed to deliver long-term returns. Each of our businesses are designed to prosper through strong leaders and independence.

Access and technology for everyone

The Internet is one of the world's most powerful equalizers, capable of propelling new ideas and people forward. Today, our mission to organize the world's information and make it universally accessible and useful is as relevant as it was when we were founded in 1998. Since then, we've evolved from a company that helps people find answers to a company that helps you get things done. We're focused on building an even more helpful Google for everyone. We aspire to give everyone the tools they need to increase their knowledge, health, happiness, and success.

Across Google, we're focused on continually innovating in areas where technology can have an impact on people's lives. Our work in AI is helping to produce earlier and more precise flood warnings. We're also working hard to make sure that our products are accessible to the more than one billion individuals around the world with a disability. For example, Android 10 has automatic Live Captions for videos, podcasts and voicemails to make it easier to consume information on the phone.

Our Other Bets are also pursuing initiatives with similar goals. For instance, as a part of our efforts in the Metro Phoenix area, Waymo is working toward our goal of making transportation safer and easier for everyone while Verily is developing tools and platforms to improve health outcomes.

Moonshots

Many companies get comfortable doing what they have always done, making only incremental changes. This incrementalism leads to irrelevance over time, especially in technology, where change tends to be revolutionary, not evolutionary. People thought we were crazy when we acquired YouTube and Android and when we launched Chrome, but those efforts have matured into major platforms for digital video and mobile devices and a safer, popular browser. We continue to look toward the future and continue to invest for the long-term. As we said in the original founders' letter, we will not shy away from high-risk, high-reward projects that we believe in because they are the key to our long-term success.

The power of machine learning

Across the company, machine learning and AI are increasingly driving many of our latest innovations. Within Google, our investments in machine learning over a decade have enabled us to build products that are smarter and more helpful. For example, our investments in AI are enabling doctors to detect cancer earlier. Machine learning powers the Google Assistant and many of our newer technologies.

Google

Serving our users

We have always been a company committed to building products that have the potential to improve the lives of millions of people. Our product innovations have made our services widely used, and our brand one of the most recognized in the world. Google's core products and platforms, such as Android, Chrome, Gmail, Google Drive, Google Maps, Google Play, Search, and YouTube each have over one billion monthly active users. As the majority of Alphabet's big bets continue to reside within Google, an important benefit of the shift to Alphabet has been the tremendous focus that we're able to have on Google's many extraordinary opportunities.

Our products have come a long way since the company was founded more than two decades ago. Instead of just showing ten blue links in our search results, we are increasingly able to provide direct answers — even if you're speaking your question using Voice Search — which makes it quicker, easier and more natural to find what you're looking for. With Google Lens, you can use your phone's camera to identify an unfamiliar landmark or find a trailer from a movie poster. Over time, we have also added other services that let you access information quickly and easily — like Google Maps, which helps you navigate to a store while showing you current traffic conditions, or Google Photos, which helps you store and organize your photos.

This drive to make information more accessible and helpful has led us over the years to improve the discovery and creation of digital content, on the web and through platforms like Google Play and YouTube. And with the migration to mobile, people are consuming more digital content by watching more videos, playing more games, listening to more music, reading more books, and using more apps than ever before. Working with content creators and partners, we continue to build new ways for people around the world to find great digital content.

Fueling all of these great digital experiences are powerful platforms and hardware. That's why we continue to invest in platforms like our Android mobile operating system, Chrome browser, Chrome operating system, and Daydream virtual reality platform, as well as growing our family of great hardware devices. We see tremendous potential for devices to be helpful, make your life easier, and get better over time, by combining the best of Google's AI, software, and hardware. This is reflected in our latest generation of hardware products like Pixel 4 phones and the Google Nest Hub smart display. Creating beautiful products that people rely on every day is a journey that we are investing in for the long run.

Key to building helpful products for users is our commitment to keeping their data safe online. As the Internet evolves, we continue to invest in our industry-leading security technologies and privacy tools, such as the addition of auto-delete controls to enable users to automatically delete activity after 3 or 18 months and incognito mode in YouTube and Maps.

Google was a company built in the cloud. We continue to invest in infrastructure, security, data management, analytics and AI. We see significant opportunity in helping businesses enhance these strengths with features like data migration, modern development environments and machine learning tools to provide enterprise-ready cloud services, including Google Cloud Platform and G Suite. Google Cloud Platform enables developers to build, test, and deploy applications on Google's highly scalable and reliable infrastructure. Our G Suite productivity tools — which include apps like Gmail, Docs, Drive, Calendar, and more — are designed with real-time collaboration and machine intelligence to help people work smarter. Because more and more of today's great digital experiences are being built in the cloud, our Google Cloud products help businesses of all sizes take advantage of the latest technology advances to operate more efficiently.

How we make money

The goal of our advertising products is to deliver relevant ads at just the right time and to give people useful commercial information, regardless of the device they're using. We also provide advertisers with tools that help them better attribute and measure their advertising campaigns. Our advertising solutions help millions of companies grow their businesses, and we offer a wide range of products across devices and formats. We generate revenues primarily by delivering both performance advertising and brand advertising.

- **Performance advertising** creates and delivers relevant ads that users will click on, leading to direct engagement with advertisers. Most of our performance advertisers pay us when a user engages in their ads. Performance advertising lets our advertisers connect with users while driving measurable results. Our ads tools allow performance advertisers to create simple text-based ads that appear on Google properties and the properties of Google Network Members. In addition, Google Network Members use our platforms to display relevant ads on their properties, generating revenues when site visitors view or click on the ads. We continue to invest in our advertising programs and make significant upgrades.
- **Brand advertising** helps enhance users' awareness of and affinity with advertisers' products and services, through videos, text, images, and other interactive ads that run across various devices. We help brand advertisers deliver digital videos and other types of ads to specific audiences for their brand-building marketing campaigns.

We have built a world-class ad technology platform for advertisers, agencies, and publishers to power their digital marketing businesses. We aim to ensure great user experiences by serving the right ads at the right time and by building deep partnerships with brands and agencies. We also seek to improve the measurability of advertising so advertisers know when their campaigns are effective.

We have allocated substantial resources to stopping bad advertising practices and protecting users on the web. We focus on creating the best advertising experiences for our users and advertisers in many ways, ranging from filtering out invalid traffic, removing billions of bad ads from our systems every year to closely monitoring the sites, apps, and videos where ads appear and blacklisting them when necessary to ensure that ads do not fund bad content.

We continue to look to the future and are making long-term investments that will grow revenues beyond advertising, including Google Cloud, Google Play, hardware, and YouTube. We are also investing in research efforts in AI and quantum computing to foster innovation across our businesses and create new opportunities.

Other Bets

Throughout Alphabet, we are also using technology to try and solve big problems across many industries. Alphabet's investment in our portfolio of Other Bets include emerging businesses at various stages of development, ranging from those in the research and development phase to those that are in the beginning stages of commercialization, and our goal is for them to become thriving, successful businesses in the medium to long term. While these early-stage businesses naturally come with considerable uncertainty, some of them are already generating revenue and making important strides in their industries. Revenues are primarily generated from internet and TV services, as well as licensing and R&D services.

Other Bets operate as independent companies and some of them have their own boards with independent members and outside investors. We are investing in our portfolio of Other Bets and being very deliberate about the focus, scale, and pace of investments.

Competition

Our business is characterized by rapid change as well as new and disruptive technologies. We face formidable competition in every aspect of our business, particularly from companies that seek to connect people with online information and provide them with relevant advertising. We face competition from:

- General purpose search engines and information services, such as Baidu, Microsoft's Bing, Naver, Seznam, Verizon's Yahoo, and Yandex.
- Vertical search engines and e-commerce websites, such as Amazon and eBay (e-commerce), Booking's Kayak (travel queries), Microsoft's LinkedIn (job queries), and WebMD (health queries). Some users will navigate directly to such content, websites, and apps rather than go through Google.
- Social networks, such as Facebook, Snapchat, and Twitter. Some users increasingly rely on social networks for product or service referrals, rather than seeking information through traditional search engines.
- Other forms of advertising, such as billboards, magazines, newspapers, radio, and television. Our advertisers typically advertise in multiple media, both online and offline.
- Other online advertising platforms and networks, including Amazon, AppNexus, Criteo, and Facebook, that compete for advertisers that use Google Ads, our primary auction-based advertising platform.
- Providers of digital video services, such as Amazon, Apple, AT&T, Disney, Facebook, Hulu, Netflix and TikTok.

In businesses that are further afield from our advertising business, we compete with companies that have longer operating histories and more established relationships with customers and users. We face competition from:

- Other digital content and application platform providers, such as Amazon and Apple.
- Companies that design, manufacture, and market consumer hardware products, including businesses that have developed proprietary platforms.
- Providers of enterprise cloud services, including Alibaba, Amazon, and Microsoft.
- Digital assistant providers, such as Amazon and Apple.

Competing successfully depends heavily on our ability to deliver and distribute innovative products and technologies to the marketplace across our businesses. Specifically, for advertising, competing successfully depends on attracting and retaining:

- Users, for whom other products and services are literally one click away, largely on the basis of the relevance of our advertising, as well as the general usefulness, security and availability of our products and services.
- Advertisers, primarily based on our ability to generate sales leads, and ultimately customers, and to deliver their advertisements in an efficient and effective manner across a variety of distribution channels.
- Content providers, primarily based on the quality of our advertiser base, our ability to help these partners generate revenues from advertising, and the terms of our agreements with them.

Intellectual Property

We rely on various intellectual property laws, confidentiality procedures and contractual provisions to protect our proprietary technology and our brand. We have registered, and applied for the registration of, U.S. and international trademarks, service marks, domain names and copyrights. We have also filed patent applications in the U.S. and foreign countries covering certain of our technology, and acquired patent assets to supplement our portfolio. We have licensed in the past, and expect that we may license in the future, certain of our rights to other parties.

Culture and Employees

We take great pride in our culture. We embrace collaboration and creativity, and encourage the iteration of ideas to address complex technical challenges. Transparency and open dialogue are central to how we work, and we aim to ensure that company news reaches our employees first through internal channels.

Despite our rapid growth, we still cherish our roots as a startup and wherever possible empower employees to act on great ideas regardless of their role or function within the company. We strive to hire great employees, with backgrounds and perspectives as diverse as those of our global users. We work to provide an environment where these talented people can have fulfilling careers addressing some of the biggest challenges in technology and society.

Our employees are among our best assets and are critical for our continued success. We expect to continue investing in hiring talented employees and to provide competitive compensation programs to our employees. As of December 31, 2019, we had 118,899 full-time employees. Although we have work councils and statutory employee representation obligations in certain countries, our U.S. employees are not represented by a labor union. Competition for qualified personnel in our industry is intense, particularly for software engineers, computer scientists, and other technical staff.

Ongoing Commitment to Sustainability

We strive to build sustainability into everything we do from designing and operating efficient data centers, advancing carbon-free energy, creating sustainable workplaces, building better devices and services, empowering users with technology, and enabling a responsible supply chain. Google has been carbon neutral since 2007 and we are the largest corporate purchaser of renewable energy in the world. In 2018, for the second consecutive year, we matched 100% of our electricity consumption with renewable energy purchases, as reported in our 2019 Environmental Report.

Some other 2019 highlights and achievements include:

- We made our largest corporate purchase of renewable energy: 18 new energy deals totaling 1,600 megawatts, which is anticipated to spur the construction of more than $2 billion in new energy infrastructure.
- 100% of Nest products launched in 2019 include recycled plastic content and we launched carbon neutral shipping for Google's direct customers who buy a product on Google Shopping or purchase Made by Google hardware.
- The Environmental Insights Explorer is enabling municipalities — which represent more than 70% of global greenhouse gas emissions according to the 2016 United Nations Habitat World Cities Report — to estimate emissions and develop climate action plans. In 2019, we expanded this tool to more than 100 cities worldwide.

We believe that climate change is one of the most significant global challenges of our time. In 2017, we developed a climate resilience strategy, which included conducting a climate scenario analysis. We have been on CDP's (formerly the Carbon Disclosure Project) Climate Change A list for five consecutive years. We believe our CDP report reflects the recommendations of the Task Force on Climate-related Financial Disclosures (TCFD).

More information on Google's approach to sustainability can be found in our annual sustainability reports. The content of our sustainability reports are not incorporated by reference into this Annual Report on Form 10-K or in any other report or document we file with the SEC.

Seasonality

Our business is affected by seasonal fluctuations in internet usage, advertising expenditures, and underlying business trends such as traditional retail seasonality.

Available Information

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

We webcast via our investor relations website our earnings calls and certain events we participate in or host with members of the investment community. Our investor relations website also provides notifications of news or announcements regarding our financial performance and other items of interest to our investors, including SEC filings, investor events, press and earnings releases, and blogs. We also share Google news and product updates on Google's Keyword blog at https://www.blog.google/, which may be of interest or material to our investors. Further, corporate governance information, including our certificate of incorporation, bylaws, governance guidelines, board committee charters, and code of conduct, is also available on our investor relations website under the heading "Other." The content of our websites are not incorporated by reference into this Annual Report on Form 10-K 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 1A. RISK FACTORS

Our operations and financial results are subject to various risks and uncertainties, including but not limited to those described below, which could harm our business, reputation, financial condition, and operating results.

Risks Specific to our Company

We generate a significant portion of our revenues from advertising, and reduced spending by advertisers, a loss of partners, or new and existing technologies that block ads online and/or affect our ability to customize ads could harm our business.

We generated over 83% of total revenues from the display of ads online in 2019. Many of our advertisers, companies that distribute our products and services, digital publishers, and content providers can terminate their contracts with us at any time. These partners may not continue to do business with us if we do not create more value (such as increased numbers of users or customers, new sales leads, increased brand awareness, or more effective monetization) than their available alternatives. Changes to our advertising policies and data privacy practices, as well as changes to other companies' advertising policies or practices may affect the advertising that we are able to provide, which could harm our business. In addition, technologies have been developed that make customized ads more difficult or that block the display of ads altogether and some providers of online services have integrated technologies that could potentially impair the availability and functionality of third-party digital advertising. Failing to provide superior value or deliver advertisements effectively and competitively could harm our reputation, financial condition, and operating results.

In addition, expenditures by advertisers tend to be cyclical, reflecting overall economic conditions and budgeting and buying patterns. Adverse macroeconomic conditions can also have a material negative effect on the demand for advertising and cause our advertisers to reduce the amounts they spend on advertising, which could harm our financial condition and operating results.

We face intense competition. If we do not continue to innovate and provide products and services that are useful to users, we may not remain competitive, which could harm our business and operating results.

Our business environment is rapidly evolving and intensely competitive. Our businesses face changing technologies, shifting user needs, and frequent introductions of rival products and services. To compete successfully, we must accurately anticipate technology developments and deliver innovative, relevant and useful products, services, and technologies in a timely manner. As our businesses evolve, the competitive pressure to innovate will encompass a wider range of products and services. We must continue to invest significant resources in research and development, including through acquisitions, in order to enhance our technology and new and existing products and services.

We have many competitors in different industries. Our current and potential domestic and international competitors range from large and established companies to emerging start-ups. Some competitors have longer operating histories in various sectors. They can use their experience and resources in ways that could affect our competitive position, including by making acquisitions, continuing to invest heavily in research and development and in talent, aggressively initiating intellectual property claims (whether or not meritorious), and continuing to compete aggressively for users, advertisers, customers, and content providers. Our competitors may be able to innovate and provide products and services faster than we can or may foresee the need for products and services before us. For example, we are investing significantly in subscription-based products and services such as YouTube, which face intense competition from large experienced companies with well established relationships with users.

Our operating results may also suffer if our products and services are not responsive to the needs of our users, advertisers, publishers, customers, and content providers. As technologies continue to develop, our competitors may be able to offer experiences that are, or that are seen to be, substantially similar to or better than ours. This may force us to compete in different ways and expend significant resources in order to remain competitive. If our competitors are more successful than we are in developing compelling products or in attracting and retaining users, advertisers, publishers, customers, and content providers, our operating results could be harmed.

Our ongoing investment in new businesses, products, services, and technologies is inherently risky, and could disrupt our current operations and harm our financial condition and operating results.

We have invested and expect to continue to invest in new businesses, products, services, and technologies. The investments that we are making across Google and Other Bets reflect our ongoing efforts to innovate and provide products and services that are useful to users, advertisers, publishers, customers, and content providers. Our investments in Google and Other Bets span a wide range of industries beyond online advertising. Such investments ultimately may not be commercially viable or may not result in an adequate return of capital and, in pursuing new strategies, we may incur unanticipated liabilities. These endeavors may involve significant risks and uncertainties, including diversion of management resources and, with respect to Other Bets, the use of alternative investment, governance, or compensation structures that may fail to adequately align incentives across the company or otherwise accomplish their objectives.

Within Google, we continue to invest heavily in hardware, including our smartphones and home devices, which is a highly competitive market with frequent introduction of new products and services, rapid adoption of technological advancements by competitors, short product life cycles, evolving industry standards, continual improvement in product price and performance characteristics, and price and feature sensitivity on the part of consumers and businesses. There can be no assurance we will be able to provide hardware that competes effectively.

We are also devoting significant resources to develop and deploy our enterprise-ready cloud services, including Google Cloud Platform and G Suite. We are incurring costs to build and maintain infrastructure to support cloud computing services and hire talent, particularly to support and scale the Cloud salesforce. At the same time, our competitors are rapidly developing and deploying cloud-based services. Pricing and delivery models are competitive and evolving, and we may not attain sufficient scale and profitability to achieve our business objectives.

Within Other Bets, we are investing significantly in the areas of health, life sciences, and transportation, among others. These investment areas face intense competition from large experienced and well-funded competitors and our offerings may not be able to compete effectively or to operate at sufficient levels of profitability.

In addition, new and evolving products and services, including those that use artificial intelligence and machine learning, raise ethical, technological, legal, regulatory, and other challenges, which may negatively affect our brands and demand for our products and services. Because all of these new ventures are inherently risky, no assurance can be given that such strategies and offerings will be successful and will not harm our reputation, financial condition, and operating results.

Our revenue growth rate could decline over time, and we anticipate downward pressure on our operating margin in the future.

Our revenue growth rate could decline over time as a result of a number of factors, including increasing competition and the continued expansion of our business into a variety of new fields. Changes in device mix, geographic mix, ongoing product and policy changes, product mix, and property mix and an increasing competition for advertising may also affect our advertising revenue growth rate. We may also experience a decline in our revenue growth rate as our revenues increase to higher levels, if there is a decrease in the rate of adoption of our products, services, and technologies, or due to deceleration or decline in demand for devices used to access our services, among other factors.

In addition to a decline in our revenue growth rate, we may also experience downward pressure on our operating margin resulting from a variety of factors, such as the continued expansion of our business into new fields, including products and services such as hardware, Google Cloud, Google Play, gaming, and subscription products, as well as significant investments in Other Bets, all of which may have margins lower than those we generate from advertising. We may also experience downward pressure on our operating margins from increasing competition and increased costs for many aspects of our business, including within advertising where changes such as device mix, property mix, and partner agreements can affect margin. The margin we earn on revenues generated from our Google Network Members could also decrease in the future if we pay a larger percentage of advertising fees to them. We may also pay increased TAC to our distribution partners as well as increased content acquisition costs to content providers. We may also face an increase in infrastructure costs, supporting businesses such as Search, Google Cloud, and YouTube. Additionally, our spend to promote new products and services or distribute certain products and services or increased investment in our innovation efforts across Google and our Other Bets businesses may affect our operating margins.

Due to these factors and the evolving nature of our business, our historical revenue growth rate and historical operating margin may not be indicative of our future performance.

Our intellectual property rights are valuable, and any inability to protect them could reduce the value of our products, services and brand as well as affect our ability to compete.

Our patents, trademarks, trade secrets, copyrights, and other intellectual property rights are important assets for us. Various events outside of our control pose a threat to our intellectual property rights, as well as to our products, services, and technologies. For example, effective intellectual property protection may not be available in every country in which our products and services are distributed or made available through the Internet. Also, the efforts we have taken to protect our proprietary rights may not be sufficient or effective. Although we seek to obtain patent protection for our innovations, it is possible we may not be able to protect some of these innovations. Moreover, we may not have adequate patent or copyright protection for certain innovations that later turn out to be important. Furthermore, there is always the possibility, despite our efforts, that the scope of the protection gained will be insufficient or that an issued patent may be deemed invalid or unenforceable.

We also seek to maintain certain intellectual property as trade secrets. The secrecy of such trade secrets and other sensitive information could be compromised, which could cause us to lose the competitive advantage resulting from these trade secrets. We also face risks associated with our trademarks. For example, there is a risk that the word “Google” could become so commonly used that it becomes synonymous with the word “search.” Some courts have ruled that "Google" is a protectable trademark, but it is possible that other courts, particularly those outside of the United States, may reach a different determination. If this happens, we could lose protection for this trademark, which could result in other people using the word “Google” to refer to their own products, thus diminishing our brand.

Any significant impairment of our intellectual property rights could harm our business and our ability to compete. Also, protecting our intellectual property rights is costly and time consuming. Any increase in the unauthorized use of our intellectual property could make it more expensive to do business and harm our operating results.

Our business depends on strong brands, and failing to maintain and enhance our brands would hurt our ability to expand our base of users, advertisers, customers, content providers, and other partners.

Our strong brands have significantly contributed to the success of our business. Maintaining and enhancing the brands within Google and Other Bets increases our ability to enter new categories and launch new and innovative products that better serve the needs of our users, advertisers, customers, content providers, and other partners. Our brands may be negatively affected by a number of factors, including, among others, reputational issues, third-party content shared on our platforms, data privacy and security issues and developments, and product or technical performance failures. For example, if we fail to appropriately respond to the sharing of misinformation or objectionable content on our services or objectionable practices by advertisers, or to otherwise adequately address user concerns, our users may lose confidence in our brands. Our brands may also be negatively affected by the use of our products or services to disseminate information that is deemed to be false or misleading.

Furthermore, failure to maintain and enhance equity in our brands may harm our business, financial condition, and operating results. Our success will depend largely on our ability to remain a technology leader and continue to provide high-quality, innovative products and services that are truly useful and play a valuable role in a range of settings.

We face a number of manufacturing and supply chain risks that, if not properly managed, could harm our financial condition, operating results, and prospects.

We face a number of risks related to manufacturing and supply chain management, which could affect our ability to supply both our products and our internet-based services.

We rely on other companies to manufacture many of our assemblies and finished products, to design certain of our components and parts, and to participate in the distribution of our products and services. Our business could be negatively affected if we are not able to engage these companies with the necessary capabilities or capacity on reasonable terms, or if those we engage fail to meet their obligations (whether due to financial difficulties or other reasons), or make adverse changes in the pricing or other material terms of our arrangements with them.

We may experience supply shortages and price increases driven by raw material availability, manufacturing capacity, labor shortages, industry allocations, tariffs, trade disputes and barriers, natural disasters, the effects of climate change (such as sea level rise, drought, flooding, wildfires, and increased storm severity), and significant changes in the financial or business condition of our suppliers. We may experience shortages or other supply chain disruptions that could negatively affect our operations. In addition, some of the components we use in our technical infrastructure and products are available only from a single source or limited sources, and we may not be able to find replacement vendors on favorable terms in the event of a supply chain disruption. In addition, a significant hardware supply interruption could delay critical data center upgrades or expansions.

We may enter into long term contracts for materials and products that commit us to significant terms and conditions. We may be liable for materials and products that are not consumed due to market acceptance, technological change, obsolescences, quality, product recalls, and warranty issues. For instance, because many of our hardware supply contracts have volume-based pricing or minimum purchase requirements, if the volume of our hardware sales decreases or does not reach projected targets, we could face increased materials and manufacturing costs or other financial liabilities that could make our products more costly per unit to manufacture and negatively affect our financial results. Furthermore, certain of our competitors may negotiate more favorable contractual terms based on volume and other commitments that may provide them with competitive advantages and may affect our supply.

Our products and services may have quality issues resulting from design, manufacturing, or operations. Sometimes, these issues may be caused by components we purchase from other manufacturers or suppliers. If the quality of our products and services does not meet expectations or our products or services are defective, it could harm our reputation, financial condition, and operating results.

We require our suppliers and business partners to comply with laws and, where applicable, our company policies, such as the Google Supplier Code of Conduct, regarding workplace and employment practices, data security, environmental compliance and intellectual property licensing, but we do not control them or their practices. Violations of law or unethical business practices could result in supply chain disruptions, canceled orders, harm to key relationships, and damage to our reputation. Their failure to procure necessary license rights to intellectual property, could affect our ability to sell our products or services and expose us to litigation or financial claims.

Interruption, interference with, or failure of our information technology and communications systems could hurt our ability to effectively provide our products and services, which could harm our reputation, financial condition, and operating results. In addition, complications with the design or implementation of our new global enterprise resource planning (ERP) system could harm our business and operations.

The availability of our products and services and fulfillment of our customer contracts depend on the continuing operation of our information technology and communications systems. Our systems are vulnerable to damage, interference, or interruption from terrorist attacks, natural disasters, the effects of climate change (such as sea level rise, drought, flooding, wildfires, and increased storm severity), power loss, telecommunications failures, computer viruses, ransomware attacks, computer denial of service attacks, phishing schemes, or other attempts to harm or access our systems. Some of our data centers are located in areas with a high risk of major earthquakes or other natural disasters. Our data centers are also subject to break-ins, sabotage, and intentional acts of vandalism, and, in some cases, to potential disruptions resulting from problems experienced by facility operators. Some of our systems are not fully redundant, and disaster recovery planning cannot account for all eventualities.

The occurrence of a natural disaster, closure of a facility, or other unanticipated problems at our data centers could result in lengthy interruptions in our service. In addition, our products and services are highly technical and complex and may contain errors or vulnerabilities, which could result in interruptions in or failure of our services or systems.

In addition, we rely extensively on information systems and technology to manage our business and summarize operating results. We are in the process of a multi-year implementation of a new ERP system, which will replace much of our existing core financial systems. The ERP system is designed to accurately maintain our financial records, enhance the flow of financial information, improve data management, and provide timely information to our management team. We may not be able to successfully implement the ERP system without experiencing delays, increased costs, and other difficulties. Failure to successfully design and implement the new ERP system as planned could harm our business, financial condition, and operating results. Additionally, if we do not effectively implement the ERP system as planned or the ERP system does not operate as intended, the effectiveness of our internal control over financial reporting could be negatively affected.

Our international operations expose us to additional risks that could harm our business, our financial condition, and operating results.

Our international operations are significant to our revenues and net income, and we plan to continue to grow internationally. International revenues accounted for approximately 54% of our consolidated revenues in 2019. In addition to risks described elsewhere in this section, our international operations expose us to other risks, including the following:

- Restrictions on foreign ownership and investments, and stringent foreign exchange controls that might prevent us from repatriating cash earned in countries outside the U.S.

- Import and export requirements, tariffs, trade disputes and barriers, and customs classifications that may prevent us from offering products or providing services to a particular market, or that could limit our ability to source assemblies and finished products from a particular market, and may increase our operating costs.
- Longer payment cycles in some countries, increased credit risk, and higher levels of payment fraud.
- Evolving foreign events, including Brexit, the United Kingdom's withdrawal from the European Union (EU). Brexit may adversely affect our revenues and could subject us to new regulatory costs and challenges (including the transfer of personal data between the EU and the United Kingdom), in addition to other adverse effects that we are unable to effectively anticipate.
- Anti-corruption laws, such as the U.S. Foreign Corrupt Practices Act, and other local laws prohibiting certain payments to government officials, violations of which could result in civil and criminal penalties.
- Uncertainty regarding liability for services and content, including uncertainty as a result of local laws and lack of legal precedent.
- Different employee/employer relationships, existence of works councils and labor unions, and other challenges caused by distance, language, and cultural differences, making it harder to do business in certain jurisdictions.

Because we conduct business in currencies other than U.S. dollars but report our financial results in U.S. dollars, we face exposure to fluctuations in foreign currency exchange rates. Although we hedge a portion of our international currency exposure, significant fluctuations in exchange rates between the U.S. dollar and foreign currencies may adversely affect our revenues and earnings. Hedging programs are also inherently risky and could expose us to additional risks that could harm our financial condition and operating results.

Risks Related to our Industry

People access the Internet through a variety of platforms and devices that continue to evolve with the advancement of technology and user preferences. If manufacturers and users do not widely adopt versions of our products and services developed for these new interfaces, our business could be harmed.

People access the Internet through a growing variety of devices such as desktop computers, mobile phones, smartphones, laptops and tablets, video game consoles, voice-activated speakers, wearables, automobiles, and television-streaming devices. Our products and services may be less popular on these new interfaces. Each manufacturer or distributor may establish unique technical standards for its devices, and our products and services may not be available on these devices as a result. Some manufacturers may also elect not to include our products on their devices. In addition, search queries are increasingly being undertaken via voice-activated speakers, apps, social media or other platforms, which could harm our business. It is hard to predict the challenges we may encounter in adapting our products and services and developing competitive new products and services. We expect to continue to devote significant resources to creating and supporting products and services across multiple platforms and devices. Failing to attract and retain a substantial number of new device manufacturers, suppliers, distributors, developers, and users, or failing to develop products and technologies that work well on new devices and platforms, could harm our business, financial condition, and operating results and ability to capture future business opportunities.

Data privacy and security concerns relating to our technology and our practices could damage our reputation, cause us to incur significant liability, and deter current and potential users or customers from using our products and services. Software bugs or defects, security breaches, and attacks on our systems could result in the improper disclosure and use of user data and interference with our users and customers' ability to use our products and services, harming our business operations and reputation.

Concerns about our practices with regard to the collection, use, disclosure, or security of personal information or other data-privacy-related matters, even if unfounded, could harm our reputation, financial condition, and operating results. Our policies and practices may change over time as expectations regarding privacy and data change.

Our products and services involve the storage and transmission of proprietary information, and bugs, theft, misuse, defects, vulnerabilities in our products and services, and security breaches expose us to a risk of loss of this information, improper use and disclosure of such information, litigation, and other potential liability. Systems and control failures, security breaches, failure to comply with our privacy policies, and/or inadvertent disclosure of user data could result in government and legal exposure, seriously harm our reputation and brand and, therefore, our business, and impair our ability to attract and retain users or customers. We expect to continue to expend significant resources to maintain security protections that shield against bugs, theft, misuse, or security vulnerabilities or breaches.

We experience cyber attacks and other attempts to gain unauthorized access to our systems on a regular basis. We may experience future security issues, whether due to employee error or malfeasance or system errors or vulnerabilities in our or other parties' systems, which could result in significant legal and financial exposure. Government inquiries and enforcement actions, litigation, and adverse press coverage could harm our business. We may be unable to anticipate or detect attacks or vulnerabilities or implement adequate preventative measures. Attacks and security issues could also compromise trade secrets and other sensitive information, harming our business.

While we have dedicated significant resources to privacy and security incident response capabilities, including dedicated worldwide incident response teams, our response process may not be adequate, may fail to accurately assess the severity of an incident, may not respond quickly enough, or may fail to sufficiently remediate an incident. As a result, we may suffer significant legal, reputational, or financial exposure, which could harm our business, financial condition, and operating results.

Our ongoing investments in safety, security, and content review will likely continue to identify abuse of our platforms and misuse of user data.

In addition to our efforts to mitigate cyber attacks, we are making significant investments in safety, security, and content review efforts to combat misuse of our services and unauthorized access to user data by third parties, including investigations and review of platform applications that could access the information of users of our services. As a result of these efforts, we could discover incidents of unnecessary access to or misuse of user data or other undesirable activity by third parties. We may not discover all such incidents or activity, whether as a result of our data limitations, including our lack of visibility over our encrypted services, the scale of activity on our platform, or other factors, and we may be notified of such incidents or activity via third parties. Such incidents and activities may include the use of user data or our systems in a manner inconsistent with our terms, contracts or policies, the existence of false or undesirable user accounts, election interference, improper ad purchases, activities that threaten people's safety on- or offline, or instances of spamming, scraping, or spreading disinformation. We may also be unsuccessful in our efforts to enforce our policies or otherwise remediate any such incidents. Any of the foregoing developments may negatively affect user trust and engagement, harm our reputation and brands, require us to change our business practices in a manner adverse to our business, and adversely affect our business and financial results. Any such developments may also subject us to additional litigation and regulatory inquiries, which could result in monetary penalties and damages, divert management's time and attention, and lead to enhanced regulatory oversight.

Problematic content, including low-quality user-generated content, web spam, content farms, and other violations of our guidelines could affect the quality of our services, which could damage our reputation and deter our current and potential users from using our products and services.

We, like others in the industry, face violations of our content guidelines, including sophisticated attempts by bad actors to manipulate our hosting and advertising systems to fraudulently generate revenues, or to otherwise generate traffic that does not represent genuine user interest or intent. While we invest significantly in efforts to promote high-quality and relevant results and to detect and prevent low-quality content and invalid traffic, we may be unable to adequately detect and prevent such abuses.

Many websites violate or attempt to violate our guidelines, including by seeking to inappropriately rank higher in search results than our search engine's assessment of their relevance and utility would rank them. Such efforts (known as "web spam") may affect the quality of content on our platforms and lead them to display false, misleading or undesirable content.

Although English-language web spam in our search results has been reduced, and web spam in most other languages is limited, we expect web spammers will continue to seek inappropriate ways to improve their rankings. We continuously combat web spam in our search results, including through indexing technology that makes it harder for spam-like, less useful web content to rank highly. We also continue to invest in and deploy proprietary technology to detect and prevent web spam from abusing our platforms.

We also face other challenges from low-quality and irrelevant content websites, including content farms, which are websites that generate large quantities of low-quality content to help them improve their search rankings. We are continually launching algorithmic changes focused on low-quality websites.

If we fail to detect and prevent an increase in problematic content, it could hurt our reputation for delivering relevant information or reduce use of our platforms, harming our financial condition or operating results. It may also subject us to litigation and regulatory inquiries, which could result in monetary penalties and damages, divert management's time and attention, and lead to enhanced regulatory oversight.

Our business depends on continued and unimpeded access to the Internet by us and our users. Internet access providers may be able to restrict, block, degrade, or charge for access to certain of our products and services, which could lead to additional expenses and the loss of users and advertisers.

Our products and services depend on the ability of our users to access the Internet, and certain of our products require significant bandwidth to work effectively. Currently, this access is provided by companies that have significant market power in the broadband and internet access marketplace, including incumbent telephone companies, cable companies, mobile communications companies, and government-owned service providers. Some of these providers have taken, or have stated that they may take measures that could degrade, disrupt, or increase the cost of user access to certain of our products by restricting or prohibiting the use of their infrastructure to support or facilitate our offerings, or by charging increased fees to us or our users to provide our offerings. Some jurisdictions have adopted regulations prohibiting certain forms of discrimination by internet access providers; however, substantial uncertainty exists in the United States and elsewhere regarding such protections. For example, in 2018 the United States Federal Communications Commission repealed net neutrality rules, which could lead internet access providers to restrict, block, degrade, or charge for access to certain of our products and services. In addition, in some jurisdictions, our products and services have been subject to government-initiated restrictions or blockages. Such interference could result in a loss of existing users, customers and advertisers, goodwill, and increased costs, and could impair our ability to attract new users, customers and advertisers, thereby harming our business.

Risks Related to Laws and Regulations

We are subject to increasing regulatory scrutiny as well as changes in public policies governing a wide range of topics that may negatively affect our business.

We and other companies in the technology industry are experiencing increased regulatory scrutiny. For instance, various regulatory agencies, including competition, consumer protection, and privacy authorities, are reviewing aspects of our products and services. We continue to cooperate with these investigations. Prior, existing, and new investigations have in the past and may in the future result in substantial fines and penalties, changes to our products and services, alterations to our business operations, and civil litigation, all of which could harm our business, reputation, financial condition, and operating results.

Changes in international and local social, political, economic, tax, and regulatory conditions or in laws and policies governing a wide range of topics may increase our cost of doing business, limit our ability to pursue certain business models or offer certain products or services, and cause us to change our business practices. Further, our investment in a variety of new fields, including the health industry and payment services, also raises a number of new regulatory issues. These factors could harm our business and operating results in material ways.

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

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

- Competition laws and regulations around the world.
- Privacy laws, such as the California Consumer Privacy Act of 2018 that came into effect in January of 2020, which gives new data privacy rights to California residents, and SB-327 in California, which regulates the security of data in connection with internet connected devices.
- Data protection laws passed by many states within the U.S. and by certain countries regarding notification to data subjects and/or regulators when there is a security breach of personal data.
- Copyright laws, such as the EU Directive on Copyright in the Digital Single Market (EUCD) of April 17, 2019, which increases the liability of content-sharing services with respect to content uploaded by their users. It has also created a new property right in news publications that will limit the ability of some online services to interact with or present such content. Each EU Member State must implement the EUCD by June 7, 2021. In addition, there are new constraining licensing regimes that limit our ability to operate with respect to copyright protected works.
- Data localization laws, which generally mandate that certain types of data collected in a particular country be stored and/or processed within that country.

- Various U.S. and international laws that govern the distribution of certain materials to children and regulate the ability of online services to collect information from minors.
- Various laws with regard to content removal and disclosure obligations, such as the Network Enforcement Act in Germany, which may affect our businesses and operations and may subject us to significant fines if such laws are interpreted and applied in a manner inconsistent with our practices or when we may not proactively discover such content due to the scale of third-party content and the limitations of existing technologies. Other countries, including Singapore, Australia, and the United Kingdom, have implemented or are considering similar legislation imposing penalties for failure to remove certain types of content.

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

- We rely on statutory safe harbors, as set forth in the Digital Millennium Copyright Act in the United States and the E-Commerce Directive in Europe, against copyright liability for various linking, caching, and hosting activities. Any legislation or court rulings affecting these safe harbors may adversely affect us.
- Court decisions such as the judgment of the Court of Justice of the European Union (CJEU) on May 13, 2014 on the 'right to be forgotten,' which allows individuals to demand that Google remove search results about them in certain instances, may limit the content we can show to our users and impose significant operational burdens.
- Court decisions that require Google to remove links not just in the jurisdiction of the issuing court, but for all versions of the search engine worldwide, including in locations where the content at issue is lawful, may limit the content we can show to our users and impose significant operational burdens. The Supreme Court of Canada issued such a decision against Google in June 2017, and others could treat its decision as persuasive. With respect to the 'right to be forgotten,' a follow-up case of the CJEU on September 24, 2019 ruled that a search engine operator is not required to remove links from all versions of the search engine worldwide, but the court also noted in some cases, removal of links from all versions of the search engine available from the EU (including non-EU specific versions) may be required.

The introduction of new businesses, products, services, and technologies, our activities in certain jurisdictions, or other actions we take may subject us to additional laws and regulations. The costs of compliance with these laws and regulations are high and are likely to increase in the future. Any failure on our part to comply with laws and regulations can result in negative publicity and diversion of management time and effort and may subject us to significant liabilities and other penalties.

We are subject to claims, suits, government investigations, and other proceedings that may harm our business, financial condition, and operating results.

We are subject to claims, suits, and government investigations involving competition, intellectual property, data privacy and security, consumer protection, tax, labor and employment, commercial disputes, content generated by our users, goods and services offered by advertisers or publishers using our platforms, and other matters. Due to our manufacturing and sale of an expanded suite of products, including hardware as well as Google Cloud offerings, we may also be subject to a variety of claims including product warranty, product liability, and consumer protection claims related to product defects, among other litigation. We may also be subject to claims involving health and safety, hazardous materials usage, other environmental impacts, or service disruptions or failures.

Any of these types of legal proceedings can have an adverse effect on us because of legal costs, diversion of management resources, negative publicity and other factors. Determining reserves for our pending litigation is a complex, fact-intensive process that requires significant judgment. The resolution of one or more such proceedings has resulted in, and may in the future result in, additional substantial fines, penalties, injunctions, and other sanctions that could harm our business, financial condition, and operating results.

We may be subject to legal liability associated with providing online services or content.

Our products and services let users exchange information, advertise products and services, conduct business, and engage in various online activities. We also place advertisements displayed on other companies' websites, and we offer third-party products, services, and/or content. The law relating to the liability of online service providers for others' activities on their services is still somewhat unsettled both within the U.S. and internationally. Claims have been brought against us for defamation, negligence, breaches of contract, copyright and trademark infringement, unfair competition, unlawful activity, torts, fraud, or other legal theories based on the nature and content of information available on or via our services.

We may be subject to claims by virtue of our involvement in hosting, transmitting, marketing, branding, or providing access to content created by third parties. Defense of any such actions could be costly and involve significant time and attention of our management and other resources, may result in monetary liabilities or penalties, and may require us to change our business in an adverse manner.

Privacy and data protection regulations are complex and rapidly evolving areas. Adverse interpretations of these laws could harm our business, reputation, financial condition, and operating results.

Authorities around the world have adopted and are considering a number of legislative and regulatory proposals concerning data protection and limits on encryption of user data. Adverse legal rulings, legislation, or regulation could result in fines and orders requiring that we change our data practices, which could have an adverse effect on our ability to provide services, harming our business operations. Complying with these evolving laws could result in substantial costs and harm the quality of our products and services, negatively affecting our business.

Recent legal developments in Europe have created compliance uncertainty regarding transfers of personal data from Europe to the United States. For example, the General Data Protection Regulation (GDPR) applies to all of our activities conducted from an establishment in the EU or related to products and services that we offer to EU users or customers, or the monitoring of their behavior in the EU. The GDPR creates a range of new compliance obligations.

Ensuring compliance with the GDPR is an ongoing commitment that involves substantial costs, and despite our efforts, governmental authorities or others have asserted and may continue to assert that our business practices fail to comply with its requirements. If our operations are found to violate GDPR requirements, we may incur substantial fines, have to change our business practices, and face reputational harm, any of which could have a material adverse effect on our business. In particular, serious breaches of the GDPR can result in administrative fines of up to 4% of annual worldwide revenues. Fines of up to 2% of annual worldwide revenues can be levied for other specified violations.

The EU-U.S. and the Swiss-U.S. Privacy Shield frameworks allow U.S. companies that self-certify to the U.S. Department of Commerce and publicly commit to comply with specified requirements to import personal data from the EU and Switzerland. However, these frameworks face a number of legal challenges and their validity remains subject to legal, regulatory, and political developments in both Europe and the U.S. The potential invalidation of data transfer mechanisms could have a significant adverse impact on our ability to process and transfer personal data outside of the EEA.

These developments create some uncertainty, and compliance obligations could cause us to incur costs or harm the operations of our products and services in ways that harm our business.

We face, and may continue to face intellectual property and other claims that could be costly to defend, result in significant damage awards or other costs (including indemnification awards), and limit our ability to use certain technologies in the future.

We, like other internet, technology and media companies, hold large numbers of patents, copyrights, trademarks, and trade secrets and are frequently subject to litigation based on allegations of infringement or other violations of intellectual property rights. In addition, patent-holding companies may frequently seek to generate income from patents they have obtained by bringing claims against us. As we have grown, the number of intellectual property claims against us has increased and may continue to increase as we develop new products, services, and technologies.

We have had patent, copyright, trade secret, and trademark infringement lawsuits filed against us claiming that certain of our products, services, and technologies infringe the intellectual property rights of others. Other parties have also sought broad injunctive relief against us by filing claims in U.S. and international courts and the U.S. International Trade Commission (ITC) for exclusion and cease-and-desist orders, which could limit our ability to sell our products or services in the U.S. or elsewhere if our products or services or those of our customers or suppliers are found to infringe the intellectual property subject to the claims. Adverse results in any of these lawsuits may include awards of monetary damages, costly royalty or licensing agreements (if licenses are available at all), or orders preventing us from offering certain features, functionalities, products, or services. They may also cause us to change our business practices and require development of non-infringing products, services, or technologies, which could result in a loss of revenues for us and otherwise harm our business.

Many of our agreements with our customers and partners, including certain suppliers, require us to defend against certain intellectual property infringement claims and in some cases indemnify them for certain intellectual property infringement claims against them, which could result in increased costs for defending such claims or significant damages if there were an adverse ruling in any such claims. Such customers and partners may also discontinue the use of our products, services, and technologies, as a result of injunctions or otherwise, which could result in loss of revenues and adversely affect our business. Moreover, intellectual property indemnities provided to us by our suppliers, when obtainable, may not cover all damages and losses suffered by us and our customers arising from intellectual property infringement claims. Furthermore, in connection with our divestitures, we have agreed, and may in the future agree, to provide indemnification for certain potential liabilities, including those associated with intellectual property claims.

Regardless of their merits, intellectual property claims are often time consuming and expensive to litigate or settle. To the extent such claims are successful, they may harm our business, including our product and service offerings, financial condition, or operating results.

Risks Related to Ownership of our Stock

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

In January 2018, January 2019, and July 2019, the board of directors of Alphabet authorized the company to repurchase up to $8.6 billion, $12.5 billion, and $25.0 billion of its Class C capital stock, respectively. Share repurchases pursuant to the January 2018 and January 2019 authorizations were completed in 2019. As of December 31, 2019, $20.8 billion remains available for repurchase. Our repurchase program does not have an expiration date and does not obligate Alphabet to repurchase any specific dollar amount or to acquire any specific number of shares. Our share repurchase program could affect the price of our stock and increase volatility and may be suspended or terminated at any time, which may result in a decrease in the trading price of our stock.

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

Our Class B common stock has 10 votes per share, our Class A common stock has one vote per share, and our Class C capital stock has no voting rights. As of December 31, 2019, Larry Page and Sergey Brin beneficially owned approximately 84.3% of our outstanding Class B common stock, which represented approximately 51.2% of the voting power of our outstanding common stock. Through their stock ownership, Larry and Sergey have significant influence over all matters requiring stockholder approval, including the election of directors and significant corporate transactions, such as a merger or other sale of our company or our assets, for the foreseeable future. In addition, because our Class C capital stock carries no voting rights (except as required by applicable law), the issuance of the Class C capital stock, including in future stock-based acquisition transactions and to fund employee equity incentive programs, could continue Larry and Sergey's current relative voting power and their ability to elect all of our directors and to determine the outcome of most matters submitted to a vote of our stockholders. This concentrated control limits or severely restricts other stockholders' ability to influence corporate matters and we may take actions that some of our stockholders do not view as beneficial, which could reduce the market price of our Class A common stock and our Class C capital stock.

Provisions in our charter documents and under Delaware law could discourage a takeover that stockholders may consider favorable.

Provisions in Alphabet's certificate of incorporation and bylaws may have the effect of delaying or preventing a change of control or changes in our management. These provisions include the following:

- Our certificate of incorporation provides for a tri-class capital stock structure. As a result of this structure, Larry and Sergey have significant influence over all matters requiring stockholder approval, including the election of directors and significant corporate transactions, such as a merger or other sale of our company or our assets. This concentrated control could discourage others from initiating any potential merger, takeover, or other change of control transaction that other stockholders may view as beneficial. As noted above, the issuance of the Class C capital stock could have the effect of continuing the influence of Larry and Sergey.
- Our board of directors has the right to elect directors to fill a vacancy created by the expansion of the board of directors or the resignation, death, or removal of a director, which prevents stockholders from being able to fill vacancies on our board of directors.
- Our stockholders may not act by written consent. As a result, a holder, or holders, controlling a majority of our capital stock would not be able to take certain actions without holding a stockholders' meeting.
- Our certificate of incorporation prohibits cumulative voting in the election of directors. This limits the ability of minority stockholders to elect director candidates.
- Stockholders must provide advance notice to nominate individuals for election to the board of directors or to propose matters that can be acted upon at a stockholders' meeting. These provisions may discourage or deter a potential acquirer from conducting a solicitation of proxies to elect the acquirer's own slate of directors or otherwise attempting to obtain control of our company.

- Our board of directors may issue, without stockholder approval, shares of undesignated preferred stock. The ability to issue undesignated preferred stock makes it possible for our board of directors to issue preferred stock with voting or other rights or preferences that could impede the success of any attempt to acquire us.

As a Delaware corporation, we are also subject to certain Delaware anti-takeover provisions. Under Delaware law, a corporation may not engage in a business combination with any holder of 15% or more of its outstanding voting stock unless the holder has held the stock for three years or, among other things, the board of directors has approved the transaction. Our board of directors could rely on Delaware law to prevent or delay an acquisition of us.

General Risks

Our operating results may fluctuate, which makes our results difficult to predict and could cause our results to fall short of expectations.

Our operating results may fluctuate as a result of a number of factors, many outside of our control. As a result, comparing our operating results on a period-to-period basis may not be meaningful, and you should not rely on our past results as an indication of our future performance. Our quarterly, year-to-date, and annual expenses as a percentage of our revenues may differ significantly from our historical rates. Our operating results in future quarters may fall below expectations. Any of these events could cause our stock price to fall. Each of the risk factors listed in this section in addition to the following factors may affect our operating results:

- Our ability to continue to attract and retain users and customers to our products and services.
- Our ability to attract user and/or customer adoption of, and generate significant revenues from, new products, services, and technologies in which we have invested considerable time and resources.
- Our ability to monetize traffic on Google properties and our Google Network Members' properties across various devices.
- Revenue fluctuations caused by changes in device mix, geographic mix, ongoing product and policy changes, product mix, and property mix.
- The amount of revenues and expenses generated and incurred in currencies other than U.S. dollars, and our ability to manage the resulting risk through our foreign exchange risk management program.
- The amount and timing of operating costs and expenses and capital expenditures related to the maintenance and expansion of our businesses, operations, and infrastructure.
- Our focus on long-term goals over short-term results.
- The results of our acquisitions, divestitures, and our investments in risky projects, including new businesses, products, services, and technologies.
- Our ability to keep our products and services operational at a reasonable cost and without service interruptions.
- The seasonal fluctuations in internet usage, advertising spending, and underlying business trends such as traditional retail seasonality. Our rapid growth has tended to mask the cyclicality and seasonality of our business. As our growth rate has slowed, the cyclicality and seasonality in our business has become more pronounced and caused our operating results to fluctuate.
- Geopolitical events, including trade disputes.
- Changes in global business or macroeconomic conditions.

Because our businesses are changing and evolving, our historical operating results may not be useful to you in predicting our future operating results.

Acquisitions, joint ventures, investments, and divestitures could result in operating difficulties, dilution, and other consequences that may harm our business, financial condition, and operating results.

Acquisitions, joint ventures, investments and divestitures are important elements of our overall corporate strategy and use of capital, and these transactions could be material to our financial condition and operating results. We expect to continue to evaluate and enter into discussions regarding a wide array of potential strategic transactions, which could create unforeseen operating difficulties and expenditures. Some of the areas where we face risks include:

- Diversion of management time and focus from operating our business to challenges related to acquisitions and other strategic transactions.
- Failure to successfully integrate and further develop the acquired business or technology.

- Implementation or remediation of controls, procedures, and policies at the acquired company.
- Integration of the acquired company's accounting, human resource, and other administrative systems, and coordination of product, engineering, and sales and marketing functions.
- Transition of operations, users, and customers onto our existing platforms.
- Failure to obtain required approvals on a timely basis, if at all, from governmental authorities, or conditions placed upon approval that could, among other things, delay or prevent us from completing a transaction, or otherwise restrict our ability to realize the expected financial or strategic goals of a transaction.
- In the case of foreign acquisitions, the need to integrate operations across different cultures and languages and to address the particular economic, currency, political, and regulatory risks associated with specific countries.
- Cultural challenges associated with integrating employees from the acquired company into our organization, and retention of employees from the businesses we acquire.
- Liability for activities of the acquired company before the acquisition, including patent and trademark infringement claims, data privacy and security issues, violations of laws, commercial disputes, tax liabilities, and other known and unknown liabilities.
- Litigation or other claims in connection with the acquired company, including claims from terminated employees, customers, former stockholders, or other third parties.

Our failure to address these risks or other problems encountered in connection with our past or future acquisitions and other strategic transactions could cause us to fail to realize their anticipated benefits, incur unanticipated liabilities, and harm our business generally.

Our acquisitions and other strategic transactions could also result in dilutive issuances of our equity securities, the incurrence of debt, contingent liabilities, or amortization expenses, or impairment of goodwill and/or purchased long-lived assets, and restructuring charges, any of which could harm our financial condition or operating results. Also, the anticipated benefits or value of our acquisitions and other strategic transactions may not materialize. In connection with our divestitures, we have agreed, and may in the future agree, to provide indemnification for certain potential liabilities, which may harm our financial condition or operating results.

If we were to lose the services of key personnel, we may not be able to execute our business strategy.

Our future success depends in large part upon the continued service of key members of our senior management team. For instance, Sundar Pichai is critical to the overall management of Alphabet and its subsidiaries and plays an important role in the development of our technology. He also plays a key role in maintaining our culture and setting our strategic direction. All of our executive officers and key employees are at-will employees, and we do not maintain any key-person life insurance policies. The loss of key personnel could seriously harm our business.

We rely on highly skilled personnel and, if we are unable to retain or motivate key personnel, hire qualified personnel, or maintain our corporate culture, we may not be able to grow effectively.

Our performance largely depends on the talents and efforts of highly skilled individuals. Our future success depends on our continuing ability to identify, hire, develop, motivate, and retain highly skilled personnel for all areas of our organization. Competition in our industry for qualified employees is intense, and certain of our competitors have directly targeted our employees. In addition, our compensation arrangements, such as our equity award programs, may not always be successful in attracting new employees and retaining and motivating our existing employees. Our continued ability to compete effectively depends on our ability to attract new employees and to retain and motivate our existing employees.

In addition, we believe that our corporate culture fosters innovation, creativity, and teamwork. As our organization grows, and we are required to implement more complex organizational management structures, particularly in light of our holding company structure, adverse changes to our corporate culture could harm our business operations.

In preparing our financial statements, we incorporate valuation methodologies that are subjective in nature and valuations may fluctuate over time.

We measure certain of our non-marketable equity and debt investments, certain other instruments including stock-based compensation awards settled in the stock of certain Other Bets, and certain assets and liabilities acquired in a business combination, at fair value on a nonrecurring basis. The determination of fair value involves use of appropriate valuation methods and certain unobservable inputs, require management judgment and estimation, and may change over time.

As it relates to our non-marketable investments, the market values can be negatively affected by liquidity, credit deterioration or losses, performance and financial results of the underlying companies, foreign exchange rates, changes in interest rates, including changes that may result from the implementation of new benchmark rates that replace LIBOR, the effect of new or changing regulations, the stock market in general, or other factors.

Since January 2018, we adjust the carrying value of our non-marketable equity investments to fair value for observable transactions of identical or similar investments of the same issuer or for impairments. All gains and losses on non-marketable equity securities, realized and unrealized, are recognized in other income (expense), which increases the volatility of our other income (expense).

As a result of these factors, the value or liquidity of our cash equivalents, as well as our marketable and non-marketable securities could decline and result in a material impairment, which could materially adversely affect our financial condition and operating results.

We could be subject to changes in tax rates, the adoption of new U.S. or international tax legislation, or exposure to additional tax liabilities.

Our future income taxes could be negatively affected by earnings being lower than anticipated in jurisdictions that have lower statutory tax rates and higher than anticipated in jurisdictions that have higher statutory tax 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 liabilities, or changes in tax laws, regulations, or accounting principles (including changes in the interpretation of existing laws), as well as certain discrete items.

In addition, we are subject to regular review and audit by both domestic and foreign tax authorities. As a result, we have received, and may in the future receive, assessments in multiple jurisdictions, including in Europe, on various tax-related assertions, such as transfer-pricing adjustments or permanent-establishment claims. Any adverse outcome of such a review or audit could have a negative effect on our operating results and financial condition and could require us to change our business practices in a manner adverse to our business. It may also subject us to additional litigation and regulatory inquiries, resulting in the diversion of management's time and attention. In addition, the determination of our worldwide provision for income taxes and other tax liabilities requires significant judgment, and there are many transactions and calculations for which the ultimate tax determination is uncertain. Although we believe our estimates are reasonable, the ultimate tax outcome may differ from the amounts recorded in our financial statements and may materially affect our financial results in the period or periods for which such determination is made.

Furthermore, due to shifting economic and political conditions, tax policies, laws, or rates in various jurisdictions may be subject to significant changes in ways that impair our financial results. In particular, France, Italy, and other countries have enacted or are considering digital services taxes, which could lead to inconsistent and potentially overlapping international tax regimes. The Organization for Economic Cooperation and Development recently released a proposal relating to its initiative for modernizing international tax rules, with the goal of having different countries enact legislation to implement a modernized and aligned international tax framework, but there can be no guarantee that this will occur.

The trading price for our Class A common stock and non-voting Class C capital stock may continue to be volatile.

The trading price of our stock has at times experienced substantial price volatility and may continue to be volatile. For example, from January 1, 2019 through December 31, 2019, the closing price of our Class A common stock ranged from $1,025.47 per share to $1,362.47 per share, and the closing price of our Class C capital stock ranged from $1,016.06 to $1,361.17 per share.

In addition to the factors discussed in this report, the trading price of our Class A common stock and Class C capital stock may fluctuate widely in response to various factors, many of which are beyond our control, including, among others:

- Quarterly variations in our operating results or those of our competitors.
- Announcements by us or our competitors of acquisitions, divestitures, investments, new products, significant contracts, commercial relationships, or capital commitments.
- Recommendations by securities analysts or changes in earnings estimates.
- Announcements about our earnings that are not in line with analyst expectations, the risk of which is enhanced because it is our policy not to give guidance on earnings.
- Announcements by our competitors of their earnings that are not in line with analyst expectations.

- Commentary by industry and market professionals about our products, strategies, and other matters affecting our business and results, regardless of its accuracy.
- The volume of shares of Class A common stock and Class C capital stock available for public sale.
- Sales of Class A common stock and Class C capital stock by us or by our stockholders (including sales by our directors, executive officers, and other employees).
- Short sales, hedging, and other derivative transactions on shares of our Class A common stock and Class C capital stock.
- The perceived values of Class A common stock and Class C capital stock relative to one another.
- Any share repurchase program.

In addition, the stock market in general, which can be affected by various factors, including overall economic and political conditions, and the market for technology companies in particular, have experienced extreme price and volume fluctuations that have often been unrelated or disproportionate to the operating performance of those companies.

These broad market and industry factors may harm the market price of our Class A common stock and our Class C capital stock, regardless of our actual operating performance.

ITEM 1B. UNRESOLVED STAFF COMMENTS

Not applicable.

ITEM 2. PROPERTIES

Our headquarters are located in Mountain View, California. We also own and lease office and building space in the surrounding areas near our headquarters, which we believe is sufficient to accommodate anticipated future growth. In addition, we own and lease office/building space and research and development sites around the world, primarily in North America, Europe, South America, and Asia. We own and operate data centers in the U.S., Europe, South America, and Asia. We believe our existing facilities, both owned and leased, are in good condition and suitable for the conduct of our business.

ITEM 3. LEGAL PROCEEDINGS

For a description of our material pending legal proceedings, please see Note 10 “Commitments and Contingencies - Legal Matters” of the Notes to Consolidated Financial Statements included in Item 8 of this Annual Report on Form 10-K, which is incorporated herein by reference.

ITEM 4. MINE SAFETY DISCLOSURES

Not applicable.

PART II

ITEM 5. MARKET FOR REGISTRANT'S COMMON EQUITY, RELATED STOCKHOLDER MATTERS AND ISSUER PURCHASES OF EQUITY SECURITIES

As of October 2, 2015, Alphabet Inc. became the successor issuer of Google Inc. pursuant to Rule 12g-3(a) under the Exchange Act. Our Class A common stock has been listed on the Nasdaq Global Select Market under the symbol "GOOG" since August 19, 2004 and under the symbol "GOOGL" since April 3, 2014. Prior to August 19, 2004, there was no public market for our stock. Our Class B common stock is neither listed nor traded. Our Class C capital stock has been listed on the Nasdaq Global Select Market under the symbol "GOOG" since April 3, 2014.

Holders of Record

As of December 31, 2019, there were approximately 2,455 and 2,030 stockholders of record of our Class A common stock and Class C capital stock, respectively. Because many of our shares of Class A common stock and Class C capital stock are held by brokers and other institutions on behalf of stockholders, we are unable to estimate the total number of stockholders represented by these record holders. As of December 31, 2019, there were approximately 66 stockholders of record of our Class B common stock.

Dividend Policy

We have never declared or paid any cash dividend on our common or capital stock. The primary use of capital continues to be to invest for the long term growth of the business. We regularly evaluate our cash and capital structure, including the size, pace and form of capital return to stockholders.

Issuer Purchases of Equity Securities

The following table presents information with respect to Alphabet's repurchases of Class C capital stock during the quarter ended December 31, 2019:

Period	Total Number of Shares Purchased (in thousands) (1)	Average Price Paid per Share (2)	Total Number of Shares Purchased as Part of Publicly Announced Programs (in thousands) (1)	Approximate Dollar Value of Shares that May Yet Be Purchased Under the Program (in millions)
October 1 - 31	1,970	$ 1,229.02	1,970	$ 24,470
November 1 - 30	1,626	$ 1,304.00	1,626	$ 22,350
December 1 - 31	1,164	$ 1,337.16	1,164	$ 20,793
Total	4,760		4,760	

(1) In January and July 2019, the board of directors of Alphabet authorized the company to repurchase up to an additional $12.5 billion and $25.0 billion of its Class C capital stock, respectively. Share repurchases pursuant to the January 2019 authorization were completed during the fourth quarter of 2019. 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. Please refer to Note 11 of the Notes to Consolidated Financial Statements included in Part II, Item 8 of this Annual Report on Form 10-K for additional information related to share repurchases.

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

Stock Performance Graphs

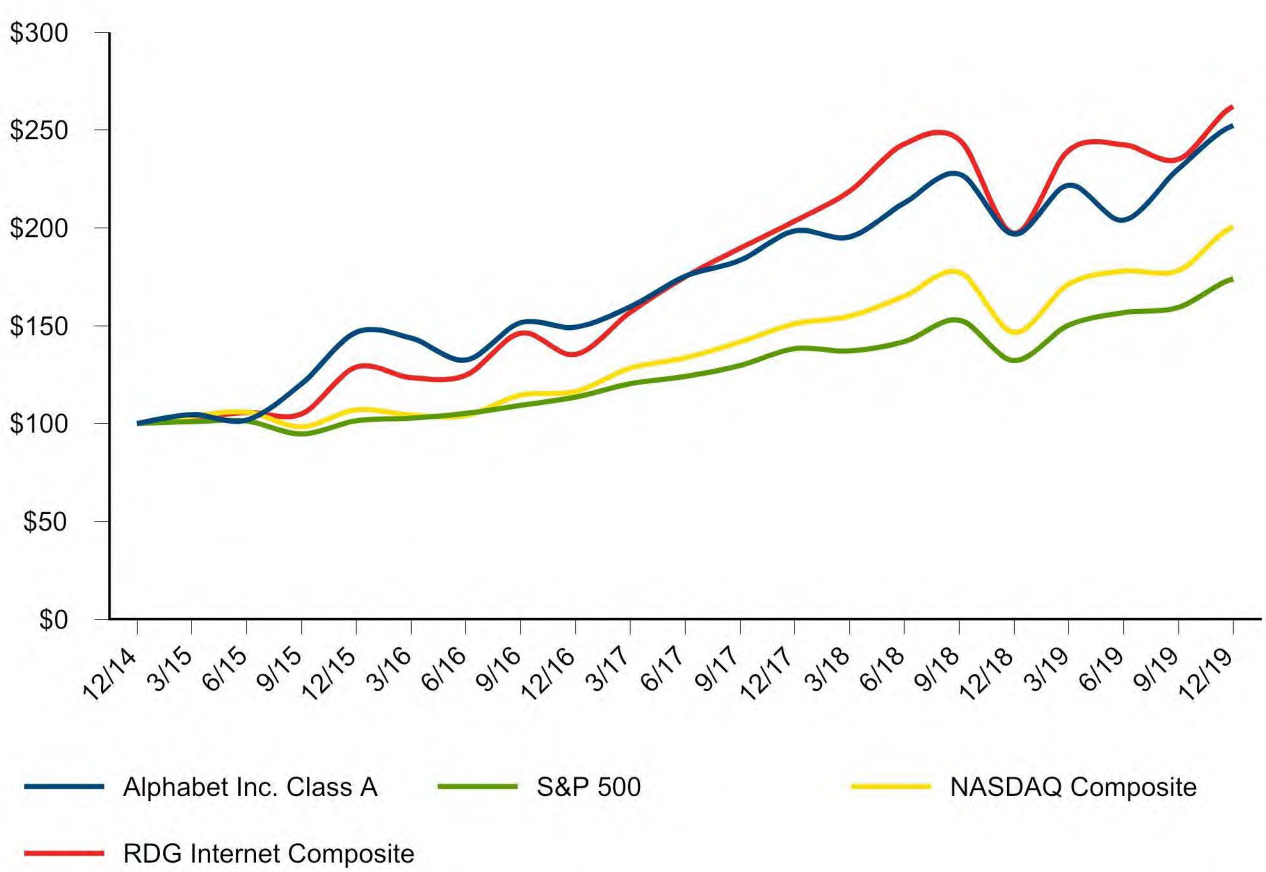
The graph below matches Alphabet Inc. Class A's cumulative 5-Year total shareholder return on common stock with the cumulative total returns of the S&P 500 index, the NASDAQ Composite index, and the RDG Internet Composite index. The graph tracks the performance of a $100 investment in our common stock and in each index (with the reinvestment of all dividends) from December 31, 2014 to December 31, 2019. The returns shown are based on historical results and are not intended to suggest future performance.

COMPARISON OF 5 YEAR CUMULATIVE TOTAL RETURN*

ALPHABET INC. CLASS A COMMON STOCK

Among Alphabet Inc., the S&P 500 Index, the

NASDAQ Composite Index, and the RDG Internet Composite Index



*$100 invested on December 31, 2014 in stock or index, including reinvestment of dividends. Fiscal year ending December 31.

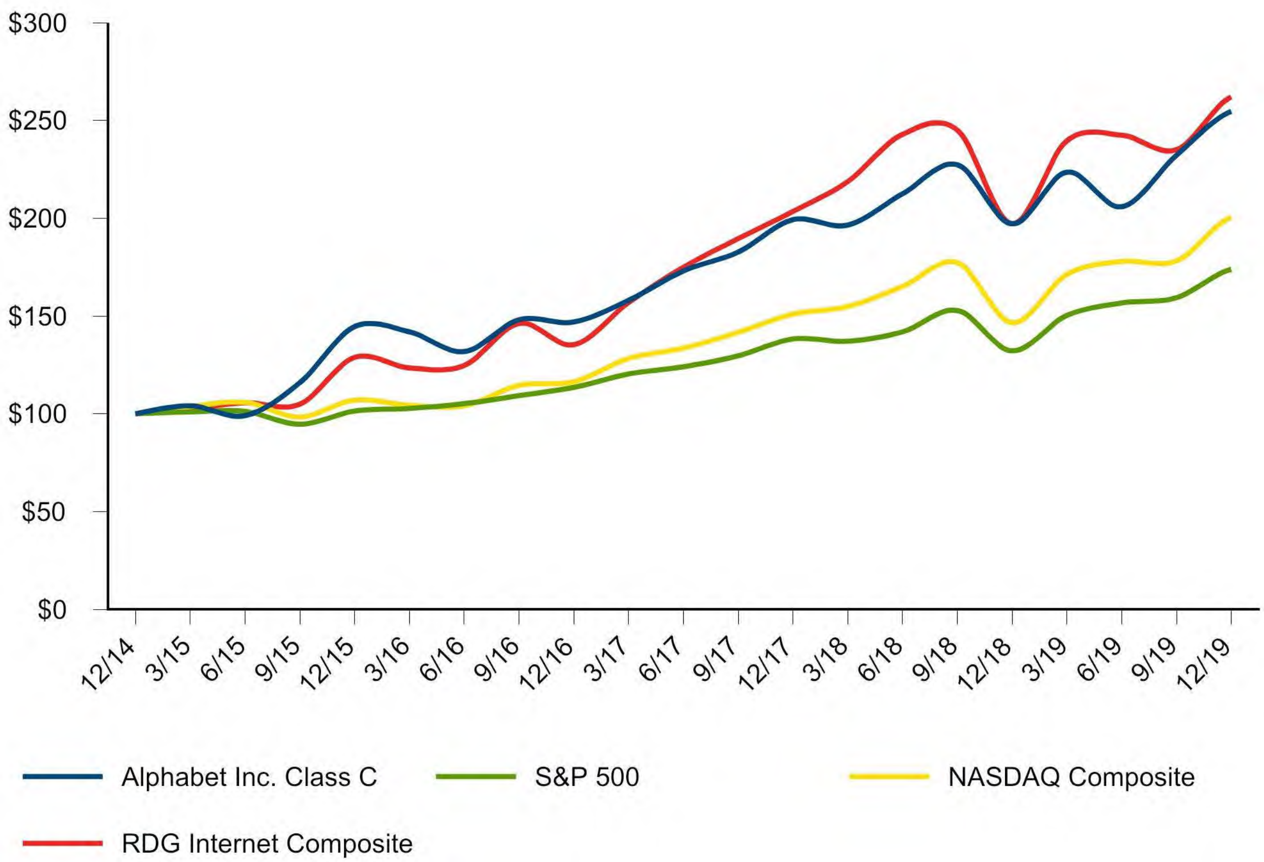
The graph below matches Alphabet Inc. Class C's cumulative 5-Year total shareholder return on capital stock with the cumulative total returns of the S&P 500 index, the NASDAQ Composite index, and the RDG Internet Composite index. The graph tracks the performance of a $100 investment in our Class C capital stock and in each index (with the reinvestment of all dividends) from December 31, 2014 to December 31, 2019. The returns shown are based on historical results and are not intended to suggest future performance.

COMPARISON OF CUMULATIVE TOTAL RETURN*

ALPHABET INC. CLASS C CAPITAL STOCK

Among Alphabet Inc., the S&P 500 Index, the

NASDAQ Composite Index, and the RDG Internet Composite Index



*$100 invested on December 31, 2014 in stock or in index, including reinvestment of dividends. Fiscal year ending December 31.

ITEM 6. SELECTED FINANCIAL DATA

The following selected consolidated financial data should be read in conjunction with Item 7 "Management's Discussion and Analysis of Financial Condition and Results of Operations" and our consolidated financial statements and the related notes appearing in Item 8 "Financial Statements and Supplementary Data" of this Annual Report on Form 10-K. The historical results are not necessarily indicative of the results to be expected in any future period.

	Year Ended December 31,				
	2015	2016	2017	2018	2019
	(in millions, except per share amounts)				
Consolidated Statements of Income Data:					
Revenues	$ 74,989	$ 90,272	$ 110,855	$ 136,819	$ 161,857
Income from operations	$ 19,360	$ 23,737	$ 26,178	$ 27,524	$ 34,231
Net income	$ 16,348	$ 19,478	$ 12,662	$ 30,736	$ 34,343
Basic net income per share of Class A and B common stock	$ 23.11	$ 28.32	$ 18.27	$ 44.22	$ 49.59
Basic net income per share of Class C capital stock	$ 24.63	$ 28.32	$ 18.27	$ 44.22	$ 49.59
Diluted net income per share of Class A and B common stock	$ 22.84	$ 27.85	$ 18.00	$ 43.70	$ 49.16
Diluted net income per share of Class C capital stock	$ 24.34	$ 27.85	$ 18.00	$ 43.70	$ 49.16

	As of December 31,				
	2015	2016	2017	2018	2019
	(in millions)				
Consolidated Balance Sheet Data:					
Cash, cash equivalents, and marketable securities	$ 73,066	$ 86,333	$ 101,871	$ 109,140	$ 119,675
Total assets	$ 147,461	$ 167,497	$ 197,295	$ 232,792	$ 275,909
Total long-term liabilities	$ 7,820	$ 11,705	$ 20,610	$ 20,544	$ 29,246
Total stockholders' equity	$ 120,331	$ 139,036	$ 152,502	$ 177,628	$ 201,442

ITEM 7. 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 II, Item 8 of this Annual Report on Form 10-K.

We have omitted discussion of 2017 results where it would be redundant to the discussion previously included in Part II, Item 7 of our 2018 Annual Report on Form 10-K, as amended.

Trends in Our Business

The following trends have contributed to the results of our consolidated operations, and we anticipate that they will continue to affect our future results:

- **Users' behaviors and advertising continue to shift online as the digital economy evolves.**

The continuing shift from an offline to online world has contributed to the growth of our business since inception, contributing to revenue growth, and we expect that this online shift will continue to benefit our business.

- **Users are increasingly using diverse devices and modalities to access our products and services, and our advertising revenues are increasingly coming from new formats.**

Our users are accessing the Internet via diverse devices and modalities, such as smartphones, wearables and smart home devices, and want to feel connected no matter where they are or what they are doing. We seek to expand our products and services to stay in front of these trends in order to maintain and grow our business.

We generate our advertising revenues increasingly from different channels, including mobile, and newer advertising formats, and the margins from the advertising revenues from these channels and newer products have generally been lower than those from traditional desktop search. Additionally, as the market for a particular device type or modality matures our revenues may be affected. For example, growth in the global smartphone market has slowed due to various factors, including increased market saturation in developed countries, which can affect our mobile advertising revenue growth rates.

We expect TAC paid to our distribution partners to increase as our revenues grow and to be affected by changes in device mix; geographic mix; partner mix; partner agreement terms; and the percentage of queries channeled through paid access points.

We expect these trends to continue to put pressure on our overall margins and affect our revenue growth rates.

- **As online advertising evolves, we continue to expand our product offerings which may affect our monetization.**

As interactions between users and advertisers change and as online user behavior evolves, we continue to expand and evolve our product offerings to serve their changing needs. Over time, we expect our monetization trends to fluctuate. For example, we have seen an increase in YouTube engagement ads, which monetize at a lower rate than traditional search ads.

- **As users in developing economies increasingly come online, our revenues from international markets continue to increase and movements in foreign exchange rates affect such revenues.**

The shift to online, as well as the advent of the multi-device world, has brought opportunities outside of the U.S., including in emerging markets, and we continue to develop localized versions of our products and relevant advertising programs useful to our users in these markets. This has led to a trend of increased revenues from international markets over time and we expect that our results will continue to be affected by our performance in these markets, particularly as low-cost mobile devices become more available. This trend could impact our margins as developing markets initially monetize at a lower rate than more mature markets.

Our international revenues represent a significant portion of our revenues and are subject to fluctuations in foreign currency exchange rates relative to the U.S. dollar. While we have a foreign exchange risk management program designed to reduce our exposure to these fluctuations, this program does not fully offset their effect on our revenues and earnings.

- **The portion of our revenues that we derive from non-advertising revenues is increasing and may affect margins.**

Non-advertising revenues have grown over time. We expect this trend to continue as we focus on expanding our offerings to our users through products and services like Google Cloud, Google Play, hardware products, and YouTube subscriptions. Across these initiatives, we currently derive non-advertising revenues primarily from sales of apps, in-app purchases, digital content products, and hardware; and licensing and service fees, including fees received for Google Cloud offerings and subscription and other services. The margins on these revenues vary significantly and may be lower than the margins on our advertising revenues. A number of our Other Bets initiatives are in their initial development stages, and as such, the sources of revenues from these businesses could change over time and the revenues could be volatile.

- **As we continue to serve our users and expand our businesses, we will invest heavily in operating and capital expenditures.**

We continue to make significant R&D investments in areas of strategic focus such as advertising, cloud, machine learning, and search, as well as in new products and services. In addition, our capital expenditures have grown over the last several years. We expect this trend to continue in the long term as we invest heavily in land and buildings for data centers and offices, and information technology infrastructure, which includes servers and network equipment.

In addition, acquisitions remain an important part of our strategy and use of capital, and we expect to continue to spend cash on acquisitions and other investments. These acquisitions generally enhance the breadth and depth of our offerings, as well as expand our expertise in engineering and other functional areas.

- **Our employees are critical to our success and we expect to continue investing in them.**

Our employees are among our best assets and are critical for our continued success. We expect to continue hiring talented employees around the globe and to provide competitive compensation programs to our employees.

Executive Overview of Results

Below are our key financial results for the fiscal year ended December 31, 2019 (consolidated unless otherwise noted):

- Revenues of $161.9 billion and revenue growth of 18% year over year, constant currency revenue growth of 20% year over year.
- Google segment revenues of $160.7 billion with revenue growth of 18% year over year and Other Bets revenues of $659 million with revenue growth of 11% year over year.
- Revenues from the United States, EMEA, APAC, and Other Americas were $74.8 billion, $50.6 billion, $26.9 billion, and $9.0 billion, respectively.
- Cost of revenues was $71.9 billion, consisting of TAC of $30.1 billion and other cost of revenues of $41.8 billion. Our TAC as a percentage of advertising revenues (TAC rate) was 22.3%.
- Operating expenses (excluding cost of revenues) were $55.7 billion.
- Income from operations was $34.2 billion.
- Other income (expense), net, was $5.4 billion.
- Effective tax rate was 13%.
- Net income was $34.3 billion with diluted net income per share of $49.16.
- Operating cash flow was $54.5 billion.
- Capital expenditures were $23.5 billion.
- Number of employees was 118,899 as of December 31, 2019. The majority of new hires during the year were engineers and product managers. By product area, the largest headcount additions were in Google Cloud and Search.

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 as Other Bets.

Our reported segments are:

- Google – Google includes our main products such as ads, Android, Chrome, hardware, Google Cloud, Google Maps, Google Play, Search, and YouTube. Our technical infrastructure is also included in Google. Google generates revenues primarily from advertising; sales of apps, in-app purchases, digital content products, and hardware; and licensing and service fees, including fees received for Google Cloud offerings and subscription-based products.
- Other Bets – Other Bets is a combination of multiple operating segments that are not individually material. Other Bets includes Access, Calico, CapitalG, GV, Verily, Waymo, and X, among others. Revenues from the Other Bets are derived primarily through the sales of internet and TV services through Access as well as licensing and R&D services through Verily.

Revenues

The following table presents our revenues by segment and revenue source (in millions). Certain amounts in prior periods have been reclassified to conform with current period presentation.

	Year Ended December 31,		
	2017	2018	2019
Google Search & other	$ 69,811	$ 85,296	$ 98,115
YouTube ads(1)	8,150	11,155	15,149
Google properties	77,961	96,451	113,264
Google Network Members' properties	17,616	20,010	21,547
Google advertising	95,577	116,461	134,811
Google Cloud	4,056	5,838	8,918
Google other(1)	10,914	14,063	17,014
Google revenues	110,547	136,362	160,743
Other Bets revenues	477	595	659
Hedging gains (losses)	(169)	(138)	455
Total revenues	$ 110,855	$ 136,819	$ 161,857

(1) YouTube non-advertising revenues are included in Google other revenues.

Google advertising revenues

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

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

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

The following table presents our Google advertising revenues (in millions):

	Year Ended December 31,		
	2017	2018	2019
Google Search & other	$ 69,811	$ 85,296	$ 98,115
YouTube ads[(1)]	8,150	11,155	15,149
Google Network Members' properties	17,616	20,010	21,547
Google advertising	$ 95,577	$ 116,461	$ 134,811
Google advertising revenues as a percentage of Google segment revenues	86.5%	85.4%	83.9%

(1) YouTube non-advertising revenues are included in Google other revenues.

Google advertising revenues are generated on our Google properties (including Google Search & other properties and YouTube) and Google Network Members' properties. Google advertising revenues consist primarily of the following:

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

Google Search & other

Our Google Search & other revenues increased $12,819 million from 2018 to 2019. The growth was primarily driven by interrelated factors including increases in search queries resulting from ongoing growth in user adoption and usage, primarily on mobile devices, continued growth in advertiser activity, and improvements we have made in ad formats and delivery. Revenue growth was partially offset by the general strengthening of the U.S. dollar compared to certain foreign currencies.

Our Google Search & other revenues increased $15,485 million from 2017 to 2018. 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. Growth was also driven by improvements in ad formats and delivery, primarily on desktop. Additionally, revenue growth was favorably affected by the general weakening of the U.S. dollar compared to certain foreign currencies.

YouTube ads

YouTube ads revenues increased $3,994 million from 2018 to 2019 and increased $3,005 million from 2017 to 2018. The largest contributors to the growth during both periods were our direct response and brand advertising products, both of which benefited from improvements to ad formats and delivery and increased advertiser spending.

Google Network Members' properties

Our Google Network Members' properties revenues increased $1,537 million from 2018 to 2019. The growth was primarily driven by strength in both AdManager (included in what was previously referred to as programmatic advertising buying) and AdMob, partially offset by the general strengthening of the U.S. dollar compared to certain foreign currencies.

Our Google Network Members' properties revenues increased $2,394 million from 2017 to 2018, primarily driven by strength in both AdMob and AdManager, offset by a decline in our traditional AdSense businesses. Additionally, the growth was favorably affected by the general weakening of the U.S. dollar compared to certain foreign currencies.

Use of Monetization Metrics

Paid clicks for our Google properties represent engagement by users and include clicks on advertisements by end-users related to searches on Google.com and other owned and operated properties including Gmail, Google Maps, and Google Play; and viewed YouTube engagement ads (certain YouTube ad formats are not included in our click or impression based metrics). Impressions for our Google Network Members' properties include impressions displayed to users served on Google Network Members' properties participating primarily in AdMob, AdSense and Google Ad Manager.

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

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

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

Google properties

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

	Year Ended December 31,	
	2018	2019
Paid clicks change	62 %	23 %
Cost-per-click change	(25)%	(7)%

The number of paid clicks through our advertising programs on Google properties increased from 2018 to 2019 due to growth in views of YouTube engagement ads; increase in clicks due to interrelated factors, including an increase in search queries resulting from ongoing growth in user adoption and usage, primarily on mobile devices; continued growth in advertiser activity; and improvements we have made in ad formats and delivery. The positive effect 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 primarily driven by continued growth in YouTube engagement ads where cost-per-click remains lower than on our other advertising platforms. Cost-per-click was also affected by changes in device mix, geographic mix, ongoing product changes, product mix, property mix, and fluctuations of the U.S. dollar compared to certain foreign currencies.

Google Network Members' properties

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

	Year Ended December 31,	
	2018	2019
Impressions change	2%	9%
Cost-per-impression change	12%	1%

Impressions increased from 2018 to 2019 primarily due to growth in AdManager. The cost-per-impression was relatively unchanged due to a combination of factors including ongoing product and policy changes and improvements we have made in ad formats and delivery, changes in device mix, geographic mix, product mix, property mix, and fluctuations of the U.S. dollar compared to certain foreign currencies.

Google Cloud

The following table presents our Google Cloud revenues (in millions):

	Year Ended December 31,		
	2017	2018	2019
Google Cloud	$ 4,056	$ 5,838	$ 8,918
Google Cloud revenues as a percentage of Google segment revenues	3.7%	4.3%	5.5%

Google Cloud revenues consist primarily of revenues from Cloud offerings, including

- Google Cloud Platform (GCP), which includes infrastructure, data and analytics, and other services
- G Suite productivity tools; and
- other enterprise cloud services.

Our Google Cloud revenues increased $3,080 million from 2018 to 2019 and increased $1,782 million from 2017 to 2018. The growth during both periods was primarily driven by continued strength in our GCP and G Suite offerings. Our infrastructure and our data and analytics platform products have been the largest drivers of growth in GCP.

Google other revenues

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

	Year Ended December 31,		
	2017	2018	2019
Google other	10,914	14,063	17,014
Google other revenues as a percentage of Google segment revenues	9.9%	10.3%	10.6%

Google other revenues consist primarily of revenues from:

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

Our Google other revenues increased $2,951 million from 2018 to 2019. The growth was primarily driven by Google Play and YouTube subscriptions.

Our Google other revenues increased $3,149 million from 2017 to 2018. The growth was primarily driven by Google Play and hardware.

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

Other Bets

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

	Year Ended December 31,		
	2017	2018	2019
Other Bets revenues	$ 477	$ 595	$ 659
Other Bets revenues as a percentage of total revenues	0.4%	0.4%	0.4%

Other Bets revenues consist primarily of revenues from sales of Access 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 addresses of our customers:

	Year Ended December 31,	
	2018	2019
United States	46%	46%
EMEA	33%	31%
APAC	15%	17%
Other Americas	6%	6%

For further details on revenues by geography, see Note 2 of the Notes to Consolidated Financial Statements included in Part II, Item 8 of this Annual Report on Form 10-K.

Use of Constant Currency Revenues and Constant Currency Revenue Growth

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

We use non-GAAP constant currency revenues and 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 U.S. Generally Accepted Accounting Principles (GAAP) results helps improve the ability to understand our performance because they exclude the effects of foreign currency volatility that are not indicative of our core operating results.

Constant currency information compares results between periods as if exchange rates had remained constant period over period. We define constant currency revenues as total revenues excluding the effect of foreign exchange rate movements and hedging activities, and use it to determine the constant currency revenue 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 effects 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 effects are excluded from revenues of both periods.

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

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

	Year Ended December 31,	
	2018	2019
EMEA revenues	$ 44,739	$ 50,645
Exclude foreign exchange effect on current period revenues using prior year rates	(1,325)	2,397
EMEA constant currency revenues	$ 43,414	$ 53,042
Prior period EMEA revenues	$ 36,236	$ 44,739
EMEA revenue growth	23%	13%
EMEA constant currency revenue growth	20%	19%
APAC revenues	$ 21,341	$ 26,928
Exclude foreign exchange effect on current period revenues using prior year rates	(49)	388
APAC constant currency revenues	$ 21,292	$ 27,316
Prior period APAC revenues	$ 16,192	$ 21,341
APAC revenue growth	32%	26%
APAC constant currency revenue growth	31%	28%
Other Americas revenues	$ 7,608	$ 8,986
Exclude foreign exchange effect on current period revenues using prior year rates	404	541
Other Americas constant currency revenues	$ 8,012	$ 9,527
Prior period Other Americas revenues	$ 6,147	$ 7,608
Other Americas revenue growth	24%	18%
Other Americas constant currency revenue growth	30%	25%
United States revenues	$ 63,269	$ 74,843
United States revenue growth	21%	18%
Hedging gains (losses)	(138)	455
Total revenues	$ 136,819	$ 161,857
Total constant currency revenues	$ 135,987	$ 164,728
Prior period revenues, excluding hedging effect[1]	$ 111,024	$ 136,957
Total revenue growth	23%	18%
Total constant currency revenue growth	22%	20%

(1) Total revenues and hedging gains (losses) for the year ended December 31, 2017 were $110,855 million and $(169) million, respectively.

Our EMEA revenue growth from 2018 to 2019 was unfavorably affected by changes in foreign currency exchange rates, primarily due to the U.S. dollar strengthening relative to the Euro and British pound.

Our APAC revenue growth from 2018 to 2019 was unfavorably affected by changes in foreign currency exchange rates primarily due to the U.S. dollar strengthening relative to the Australian dollar and South Korean won, partially offset by the U.S. dollar weakening relative to the Japanese yen.

Our Other Americas revenue growth from 2018 to 2019 was unfavorably affected by changes in foreign currency exchange rates, primarily due to the U.S. dollar strengthening relative to the Brazilian real and Argentine peso.

Costs and Expenses

Cost of Revenues

Cost of revenues consists of 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.

The cost of revenues as a percentage of revenues generated from ads placed on Google Network Members' properties are significantly higher than the cost of revenues as a percentage of 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.

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

- Content acquisition costs primarily related to payments to content providers from whom we license video and other content for distribution on YouTube advertising and subscription services and Google Play (we pay fees to these content providers based on revenues generated or a flat fee);
- Expenses associated with our data centers and other operations (including bandwidth, compensation expenses (including stock-based compensation (SBC)), depreciation, energy, and other equipment costs); and
- Inventory related costs for hardware we sell.

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

	Year Ended December 31,	
	2018	2019
TAC	$ 26,726	$ 30,089
Other cost of revenues	32,823	41,807
Total cost of revenues	$ 59,549	$ 71,896
Total cost of revenues as a percentage of revenues	43.5%	44.4%

Cost of revenues increased $12,347 million from 2018 to 2019. The increase was due to increases in other cost of revenues and TAC of $8,984 million and $3,363 million, respectively.

The increase in other cost of revenues from 2018 to 2019 was due to an increase in data center and other operations costs. Additionally, there was an increase in content acquisition costs for YouTube consistent with the growth in YouTube revenues.

The increase in TAC from 2018 to 2019 was due to increases in TAC paid to distribution partners and to Google Network Members, primarily driven by growth in revenues subject to TAC. The TAC rate decreased from 22.9% to 22.3%, primarily due to the favorable revenue mix shift from Google Network Members' properties to Google properties. The TAC rate on Google properties revenues increased primarily due to the ongoing shift to mobile, which carries higher TAC because more mobile searches are channeled through paid access points. The TAC rate on Google Network revenues decreased primarily due to changes in product mix to products that carry a lower TAC rate.

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

- The amount of TAC paid to Google Network Members, which is affected by a combination of factors such as geographic mix, product mix, revenue share terms, and fluctuations of the U.S. dollar compared to certain foreign currencies;
- The amount of TAC paid to distribution partners, which is affected by changes in device mix, geographic mix, partner mix, partner agreement terms such as revenue share arrangements, and the percentage of queries channeled through paid access points;
- Relative revenue growth rates of Google properties and Google Network Members' properties;
- Costs associated with our data centers and other operations to support ads, Google Cloud, Search, YouTube and other products;
- Content acquisition costs, which are primarily affected by the relative growth rates in our YouTube advertising and subscription revenues;
- Costs related to hardware sales; and
- Increased proportion of non-advertising revenues, which generally have higher costs of revenues, relative to our advertising revenues.

Research and Development

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

	Year Ended December 31,	
	2018	2019
Research and development expenses	$ 21,419	$ 26,018
Research and development expenses as a percentage of revenues	15.7%	16.1%

R&D expenses consist primarily of:

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

R&D expenses increased $4,599 million from 2018 to 2019. The increase was primarily due to an increase in compensation expenses (including SBC) and facilities-related costs of $3,519 million, largely resulting from a 23% increase in headcount.

Over time, R&D expenses as a percentage of revenues may be affected by a number of factors including continued investment in ads, Android, Chrome, Google Cloud, Google Play, hardware, machine learning, Other Bets, and Search.

Sales and Marketing

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

	Year Ended December 31,	
	2018	2019
Sales and marketing expenses	$ 16,333	$ 18,464
Sales and marketing expenses as a percentage of revenues	11.9%	11.4%

Sales and marketing expenses consist primarily of:

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

Sales and marketing expenses increased $2,131 million from 2018 to 2019. The increase was primarily due to an increase in compensation expenses (including SBC) and facilities-related costs of $1,371 million, largely resulting from a 15% increase in headcount. In addition, there was an increase in advertising and promotional expenses of $402 million.

Over time, sales and marketing expenses as a percentage of revenues may be affected by a number of factors including the seasonality associated with new product and service launches.

General and Administrative

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

	Year Ended December 31,	
	2018	2019
General and administrative expenses	$ 6,923	$ 9,551
General and administrative expenses as a percentage of revenues	5.1%	5.9%

General and administrative expenses consist primarily of:

- Compensation expenses (including SBC) and facilities-related costs for employees in our finance, human resources, information technology, and legal organizations;
- Depreciation expenses;
- Equipment-related expenses;
- Legal-related expenses; and

- Professional services fees primarily related to audit, information technology consulting, outside legal, and outsourcing services.

General and administrative expenses increased $2,628 million from 2018 to 2019. The increase was primarily due to an increase in legal-related expenses of $1,157 million, including a charge of $554 million from a legal settlement in 2019 and the effect of a legal settlement gain recorded in 2018. Additionally, there was an increase in compensation expenses (including SBC) and facilities-related costs of $687 million, largely resulting from a 19% increase in headcount.

Performance fees of $1,203 million have been reclassified from general and administrative expenses to other income (expense), net, for 2018 to conform with current period presentation. See Note 7 of the Notes to Consolidated Financial Statements included in Part II, Item 8 of this Annual Report on Form 10-K for further details.

Over time, general and administrative expenses as a percentage of revenues may be affected by discrete items such as legal settlements.

European Commission Fines

In July 2018, the EC announced its decision that certain provisions in Google's Android-related distribution agreements infringed European competition law. The EC decision imposed a €4.3 billion ($5.1 billion as of June 30, 2018) fine, which was accrued in the second quarter of 2018.

In March 2019, the EC announced its decision that certain contractual provisions in agreements that Google had with AdSense for Search partners infringed European competition law. The EC decision imposed a €1.5 billion ($1.7 billion as of March 20, 2019) fine, which was accrued in the first quarter of 2019.

Please refer to Note 10 of the Notes to Consolidated Financial Statements included in Part II, Item 8 of this Annual Report on Form 10-K for further information.

Other Income (Expense), Net

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

	Year Ended December 31,	
	2018	2019
Other income (expense), net	$ 7,389	$ 5,394
Other income (expense), net, as a percentage of revenues	5.4%	3.3%

Other income (expense), net, decreased $1,995 million from 2018 to 2019. This decrease was primarily driven by a decrease in gains on equity securities, which were $2,649 million in 2019 as compared to $5,460 million in 2018. The majority of the gains in both periods were unrealized. The effect of the decrease in gains on equity securities was partially offset by a decrease in performance fees. The decrease in other income (expense) was also driven by a decrease in gains on debt securities primarily due to an unrealized gain recognized in 2018 resulting from the modification of the terms of a non-marketable debt security.

Performance fees of $1,203 million have been reclassified from general and administrative expenses to other income (expense), net, for 2018 to conform with current period presentation. See Note 7 of the Notes to Consolidated Financial Statements included in Part II, Item 8 of this Annual Report on Form 10-K for further details.

Over time, other income (expense), net, as a percentage of revenues may be affected by market dynamics and other factors. Equity values generally change daily for marketable equity securities and upon the occurrence of observable price changes or upon impairment of non-marketable equity securities. In addition, volatility in the global economic climate and financial markets could result in a significant change in the value of our equity securities. Fluctuations in the value of these investments has, and we expect will continue to, contribute to volatility of OI&E in future periods. For additional information about equity investments, see Note 1 and Note 3 of the Notes to Consolidated Financial Statements included in Part II, Item 8 of this Annual Report on Form 10-K.

Provision for Income Taxes

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

	Year Ended December 31,	
	2018	2019
Provision for income taxes	$ 4,177	$ 5,282
Effective tax rate	12.0%	13.3%

Our provision for income taxes and our effective tax rate increased from 2018 to 2019, due to discrete events in 2018 and 2019. In 2018, we released our deferred tax asset valuation allowance related to gains on equity securities and recognized the benefits of the U.S. Tax Cuts and Jobs Act ("Tax Act"). In 2019, we recognized an increase in discrete benefits related to the resolution of multi-year audits, partially offset by the reversal of Altera tax benefit as a result of the U.S. Court of Appeals decision. See Note 14 of the Notes to Consolidated Financial Statements included in Part II, Item 8 of this Annual Report on Form 10-K for further information.

As of December 31, 2019, we have simplified our corporate legal entity structure and now license intellectual property from the U.S. that was previously licensed from Bermuda. This will affect our geographic mix of earnings.

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

Quarterly Results of Operations

The following tables presenting our quarterly results of operations should be read in conjunction with the consolidated financial statements and related notes included in Part II, Item 8 of this Annual Report on Form 10-K. We have prepared the unaudited information on the same basis as our audited consolidated financial statements. Our operating results for any quarter are not necessarily indicative of results for any future quarters or for a full year.

The following table presents our unaudited quarterly results of operations for the eight quarters ended December 31, 2019. This table includes all adjustments, consisting only of normal recurring adjustments, that we consider necessary for a fair presentation of our consolidated financial position and operating results for the quarters presented. Seasonal fluctuations in internet usage and advertiser expenditures, underlying business trends such as traditional retail seasonality and macroeconomic conditions have affected, and are likely to continue to affect, our business. Commercial queries typically increase significantly in the fourth quarter of each year. These seasonal trends have caused, and will likely continue to cause, fluctuations in our quarterly results, including fluctuations in sequential revenue growth rates.

	Quarter Ended							
	Mar 31, 2018	Jun 30, 2018	Sept 30, 2018	Dec 31, 2018	Mar 31, 2019	Jun 30, 2019	Sept 30, 2019	Dec 31, 2019
	(In millions, except per share amounts) (unaudited)							
Consolidated Statements of Income Data:								
Revenues	$ 31,146	$ 32,657	$ 33,740	$ 39,276	$ 36,339	$ 38,944	$ 40,499	$ 46,075
Costs and expenses:								
Cost of revenues	13,467	13,883	14,281	17,918	16,012	17,296	17,568	21,020
Research and development	5,039	5,114	5,232	6,034	6,029	6,213	6,554	7,222
Sales and marketing	3,604	3,780	3,849	5,100	3,905	4,212	4,609	5,738
General and administrative	1,403	1,764	1,753	2,003	2,088	2,043	2,591	2,829
European Commission fines	0	5,071	0	0	1,697	0	0	0
Total costs and expenses	23,513	29,612	25,115	31,055	29,731	29,764	31,322	36,809
Income from operations	7,633	3,045	8,625	8,221	6,608	9,180	9,177	9,266
Other income (expense), net	2,910	1,170	1,458	1,851	1,538	2,967	(549)	1,438
Income from continuing operations before income taxes	10,543	4,215	10,083	10,072	8,146	12,147	8,628	10,704
Provision for income taxes	1,142	1,020	891	1,124	1,489	2,200	1,560	33
Net income	$ 9,401	$ 3,195	$ 9,192	$ 8,948	$ 6,657	$ 9,947	$ 7,068	$ 10,671
Basic net income per share of Class A and B common stock and Class C capital stock	$ 13.53	$ 4.60	$ 13.21	$ 12.87	$ 9.58	$ 14.33	$ 10.20	$ 15.49
Diluted net income per share of Class A and B common stock and Class C capital stock	$ 13.33	$ 4.54	$ 13.06	$ 12.77	$ 9.50	$ 14.21	$ 10.12	$ 15.35

Capital Resources and Liquidity

As of December 31, 2019, we had $119.7 billion in cash, cash equivalents, and marketable securities. Cash equivalents and marketable securities are comprised of time deposits, money market funds, highly liquid government bonds, corporate debt securities, mortgage-backed and asset-backed securities and marketable equity securities.

As of December 31, 2019, we had long-term taxes payable of $7.3 billion related to a one-time transition tax payable incurred as a result of the Tax Act. As permitted by the Tax Act, we will pay the transition tax in annual interest-free installments through 2025.

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

In November 2019, we entered into an agreement to acquire Fitbit, a leading wearables brand, for $7.35 per share, representing a total purchase price of approximately $2.1 billion as of the date of the agreement. The acquisition of Fitbit is expected to be completed in 2020, subject to customary closing conditions, including the receipt of regulatory approvals.

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

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 December 31, 2019. We have $4.0 billion of revolving credit facilities expiring in July 2023 with no amounts outstanding as of December 31, 2019. The interest rate for the credit facilities is determined based on a formula using certain market rates. 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 December 31, 2019, we have senior unsecured notes outstanding due in 2021, 2024, and 2026 with a total carrying value of $4.0 billion.

As of December 31, 2019, we had remaining authorization of $20.8 billion for repurchase of 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. Please refer to Note 11 of the Notes to Consolidated Financial Statements included in Part II, Item 8 of this Annual Report on Form 10-K for additional information related to share repurchases.

We continue to make significant investments in land and buildings for data centers and offices and information technology infrastructure through purchases of property and equipment and lease arrangements to provide capacity for the growth of our business. During the year ended December 31, 2019, we spent $23.5 billion on capital expenditures and recognized total operating lease assets of $4.4 billion. As of December 31, 2019, the amount of total future lease payments under operating leases, which had a weighted average remaining lease term of 10 years, was $13.9 billion. Finance leases were not material for the year ended December 31, 2019. Please refer to Note 4 of the Notes to Consolidated Financial Statements included in Part II, Item 8 of this Annual Report on Form 10-K for further information on the leases.

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

	Year Ended December 31,	
	2018	2019
Net cash provided by operating activities	$ 47,971	$ 54,520
Net cash used in investing activities	$ (28,504)	$ (29,491)
Net cash used in financing activities	$ (13,179)	$ (23,209)

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, digital content products, and hardware; and licensing and service fees, including fees received for Google Cloud offerings and subscription-based products.

Our primary uses of cash from our operating activities include payments to our 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 inventory costs, other general corporate expenditures, and income taxes.

Net cash provided by operating activities increased from 2018 to 2019 primarily due to increases in cash received from revenues, offset by increases in cash paid for cost of revenues and operating expenses.

Cash Used in Investing Activities

Cash provided by investing activities consists primarily of maturities and sales of our investments in marketable and non-marketable securities. Cash used in investing activities consists primarily of purchases of property and equipment, which primarily includes our investments in land and buildings for data centers and offices and information technology infrastructure to provide capacity for the growth of our businesses; purchases of marketable and non-marketable securities; and payments for acquisitions.

Net cash used in investing activities increased from 2018 to 2019 primarily due to a net increase in purchases of securities and an increase in payments for acquisitions, partially offset by a decrease in payments for purchases of property and equipment. The decrease in purchases of property and equipment was driven by decreases in purchases of servers as well as land and buildings for offices, partially offset by an increase in data center construction.

Cash Used in Financing Activities

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

Net cash used in financing activities increased from 2018 to 2019 primarily due to an increase in cash payments for repurchases of capital stock and a decrease in proceeds from sale of interest in consolidated entities.

Contractual Obligations as of December 31, 2019

The following summarizes our contractual obligations as of December 31, 2019 (in millions):

	Payments Due By Period				
	Total	Less than 1 year	1-3 years	3-5 years	More than 5 years
Operating lease obligations(1)	$ 13,854	$ 1,757	$ 3,525	$ 2,809	$ 5,763
Obligations for leases that have not yet commenced(1)	7,418	249	850	1,314	5,005
Purchase obligations(2)	5,660	4,212	933	202	313
Long-term debt obligations(3)	5,288	227	1,258	1,224	2,579
Tax payable(4)	7,315	0	1,166	3,661	2,488
Other long-term liabilities reflected on our balance sheet(5)	1,484	245	643	367	229
Total contractual obligations	$ 41,019	$ 6,690	$ 8,375	$ 9,577	$ 16,377

(1) For further information, refer to Note 4 of the Notes to Consolidated Financial Statements included in Part II, Item 8 of this Annual Report on Form 10-K.

(2) Represents non-cancelable contractual obligations primarily related to information technology assets and data center operation costs; purchases of inventory; and digital media content licensing arrangements. The amounts included above represent the non-cancelable portion of agreements or the minimum cancellation fee. For those agreements with variable terms, we do not estimate the non-cancelable obligation beyond any minimum quantities and/or pricing as of December 31, 2019. Excluded from the table above are open orders for purchases that support normal operations.

(3) Represents our principal and interest payments. For further information on long-term debt, refer to Note 6 of the Notes to Consolidated Financial Statements included in Part II, Item 8 of this Annual Report on Form 10-K.

(4) Represents one-time transition tax payable incurred as a result of the Tax Act. For further information, refer to Note 14 of the Notes to Consolidated Financial Statements included in Part II, Item 8 of this Annual Report on Form 10-K. Excluded from the table above are long-term taxes payable of $2.6 billion as of December 31, 2019 primarily related to uncertain tax positions, for which 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.

(5) Represents cash obligations recorded on our Consolidated Balance Sheets, including the short-term portion of these long-term liabilities, primarily for the construction of offices and certain commercial agreements. These amounts do not include the EC fines which are classified as current liabilities on our Consolidated Balance Sheets. For further information regarding the EC fines, refer to Note 10 of the Notes to Consolidated Financial Statements included in Part II, Item 8 of this Annual Report on Form 10-K.

Off-Balance Sheet Arrangements

As of December 31, 2019, we did not have any off-balance sheet arrangements, as defined in Item 303(a)(4)(ii) of Regulation S-K, that have or are reasonably likely to have a current or future effect on our financial condition, changes in our financial condition, revenues, or expenses, results of operations, liquidity, capital expenditures, or capital resources that is material to investors.

Critical Accounting Policies and Estimates

We prepare our consolidated financial statements in accordance with GAAP. In doing so, we have to make estimates and assumptions that affect our reported amounts of assets, liabilities, revenues, expenses, gains and losses, 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.

Please see Notes to Consolidated Financial Statements included in Part II, Item 8 of this Annual Report on Form 10-K for a summary of significant accounting policies and the effect on our financial statements.

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.

Income Taxes

We are subject to income taxes in the U.S. and foreign jurisdictions. Significant judgment is required in evaluating our uncertain tax positions and determining our provision for income taxes.

Although we believe we have adequately reserved for our uncertain tax positions, no assurance can be given that the final tax outcome of these matters will not be different. We adjust these reserves in light of changing facts and circumstances, such as the closing of a tax audit or the refinement of an estimate. To the extent that the final tax outcome of these matters is different than the amounts recorded, such differences will affect the provision for income taxes and the effective tax rate in the period in which such determination is made.

The provision for income taxes includes the effect of reserve provisions and changes to reserves that are considered appropriate as well as the related net interest and penalties. In addition, we are subject to the continuous examination of our income tax returns by the Internal Revenue Services (IRS) and other tax authorities which may assert assessments against us. We regularly assess the likelihood of adverse outcomes resulting from these examinations and assessments to determine the adequacy of our provision for income taxes.

Loss Contingencies

We are regularly subject to claims, suits, government investigations, and other proceedings involving competition and antitrust, intellectual property, privacy, consumer protection, non-income taxes, labor and employment, commercial disputes, content generated by our users, goods and services offered by advertisers or publishers using our platforms, and other matters. Certain of these 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 possible loss in the Notes to the Consolidated Financial Statements.

We evaluate, on a regular 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 and changes to our disclosures as appropriate. Significant judgment is required to determine both the likelihood of there being, and the estimated amount of, a loss related to such matters. Until the final resolution of such matters, there may be an exposure to loss in excess of the amount recorded, and such amounts could be material. Should any of our estimates and assumptions change or prove to have been incorrect, it could have a material effect on our business, consolidated financial position, results of operations, or cash flows.

Long-lived Assets

Long-lived assets, including property and equipment, long-term prepayments, and intangible assets, excluding goodwill, are reviewed for impairment whenever events or changes in circumstances indicate that the carrying amount of an asset may not be recoverable. The evaluation is performed at the lowest level of identifiable cash flows independent of other assets. An impairment loss would be recognized when estimated undiscounted future cash flows generated from the assets are less than their carrying amount. Measurement of an impairment loss would be based on the excess of the carrying amount of the asset group over its fair value.

Fair Value Measurements

We measure certain of our non-marketable equity and debt investments, certain other instruments including stock-based compensation awards settled in the stock of certain Other Bets, and certain assets and liabilities acquired in a business combination, at fair value on a nonrecurring basis. The determination of fair value involves the use of appropriate valuation methods and relevant inputs into valuation models. The fair value hierarchy prioritizes the inputs used to measure fair value whereby it gives the highest priority to quoted prices (unadjusted) in active markets for identical assets or liabilities and the lowest priority to unobservable inputs. We maximize the use of relevant observable inputs and minimize the use of unobservable inputs. Our use of unobservable inputs reflects the assumptions that market participants would use and may include our own data adjusted based on reasonably available information. We apply judgment in assessing the relevance of observable market data to determine the priority of inputs under the fair value hierarchy, particularly in situations where there is very little or no market activity.

In determining the fair values of our non-marketable equity and debt investments, as well as assets acquired (especially with respect to intangible assets) and liabilities assumed in business combinations, we make significant estimates and assumptions, some of which include the use of unobservable inputs.

Certain stock-based compensation awards may be settled in the stock of certain of our Other Bets or in cash. These awards are based on the equity values of the respective Other Bet, which requires use of unobservable inputs.

We also have compensation arrangements with payouts based on realized investment returns, i.e. performance fees. We recognize compensation expense based on the estimated payouts, which may result in expense recognized before investment returns are realized, and may require the use of unobservable inputs.

Non-marketable Equity Securities

Our non-marketable equity securities not accounted for under the equity method are carried either at fair value or under the measurement alternative. Under the measurement alternative, the carrying value is measured at cost, less any impairment, plus or minus changes resulting from observable price changes in orderly transactions for the identical or a similar investment of the same issuer. Determining whether an observed transaction is similar to a security within our portfolio requires judgment based on the rights and obligations of the securities. Recording upward and downward adjustments to the carrying value of our equity securities as a result of observable price changes requires quantitative assessments of the fair value of our securities using various valuation methodologies and involves the use of estimates.

Non-marketable equity securities are also subject to periodic impairment reviews. Our quarterly impairment analysis considers both qualitative and quantitative factors that may have a significant effect on the investment's fair value. Qualitative factors considered include industry and market conditions, financial performance, business prospects, and other relevant events and factors. When indicators of impairment exist, we prepare quantitative assessments of the fair value of our equity investments using both the market and income approaches which require judgment and the use of estimates, including discount rates, investee revenues and costs, and comparable market data of private and public companies, among others. When our assessment indicates that an impairment exists, we measure our non-marketable securities at fair value.

ITEM 7A. QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK

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

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. Principal currencies hedged included the Australian dollar, British pound, Canadian dollar, Euro and Japanese yen. For the purpose of analyzing foreign currency exchange risk, we considered the historical trends in foreign currency exchange rates and determined that it was reasonably possible that adverse changes in exchange rates of 10% could be experienced in the near term.

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 effect of foreign 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.

If an adverse 10% foreign currency exchange rate change was applied to total monetary assets and liabilities denominated in currencies other than the local currencies at the balance sheet dates, it would have resulted in an adverse effect on income before income taxes of approximately $1 million and $8 million as of December 31, 2018 and 2019, respectively. The adverse effect as of December 31, 2018 and 2019 is after consideration of the offsetting effect of approximately $374 million and $662 million, respectively, from foreign exchange contracts in place for the years ended December 31, 2018 and 2019.

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 collars and forwards offset the foreign currency gains related to our earnings. These hedging contracts reduce, but do not entirely eliminate, the effect of foreign currency exchange rate movements. We designate these contracts as cash flow hedges for accounting purposes. We reflect the gains or losses of foreign currency spot rate changes as a component of AOCI and subsequently reclassify them into revenues to offset the hedged exposures as they occur.

If the U.S. dollar weakened by 10% as of December 31, 2018 and 2019, the amount recorded in AOCI related to our foreign exchange contracts before tax effect would have been approximately $772 million and $1.1 billion lower as of December 31, 2018 and 2019, respectively. The change in the value recorded in AOCI would be expected to offset a corresponding foreign currency change in forecasted hedged revenues when recognized.

We use foreign exchange forward contracts designated as net investment hedges to hedge the foreign currency risks related to our investment in foreign subsidiaries. These forward contracts serve to offset the foreign currency translation risk from our foreign operations.

If the U.S. dollar weakened by 10%, the amount recorded in cumulative translation adjustment (CTA) within AOCI related to our net investment hedge would have been approximately $635 million and $936 million lower as of December 31, 2018 and 2019, respectively. The change in value recorded in CTA would be expected to offset a corresponding foreign currency translation gain or loss from our investment in foreign subsidiaries.

Interest Rate Risk

Our Corporate Treasury investment strategy is to achieve a return that will allow us to preserve capital and maintain liquidity. We invest primarily in debt securities including those of the U.S. government and its agencies, corporate debt securities, 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 affected due to a rise in interest rates, while floating rate securities may produce less income than predicted if interest rates fall. Unrealized gains or losses on our marketable debt securities are primarily due to 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 gains and losses recorded in AOCI until the securities are sold.

We use value-at-risk (VaR) analysis to determine the potential effect of fluctuations in interest rates on the value of our marketable debt security portfolio. The VaR is the expected loss in fair value, for a given confidence interval, for our investment portfolio due to adverse movements in interest rates. We use a variance/covariance VaR model with 95% confidence interval. The estimated one-day loss in fair value of our marketable debt securities as of December 31, 2018 and 2019 are shown below (in millions):

	As of December 31,		12-Month Average As of December 31,	
	2018	2019	2018	2019
Risk Category - Interest Rate	$ 58	$ 104	$ 66	$ 90

Actual future gains and losses associated with our marketable debt security portfolio may differ materially from the sensitivity analyses performed as of December 31, 2018 and 2019 due to the inherent limitations associated with predicting the timing and amount of changes in interest rates and our actual exposures and positions. VaR analysis is not intended to represent actual losses but is used as a risk estimation.

Equity Investment Risk

Our marketable and non-marketable equity securities are subject to a wide variety of market-related risks that could substantially reduce or increase the fair value of our holdings.

Our marketable equity securities are publicly traded stocks or funds and our non-marketable equity securities are investments in privately held companies, some of which are in the startup or development stages.

We record our marketable equity securities not accounted for under the equity method at fair value based on readily determinable market values, of which publicly traded stocks and mutual funds are subject to market price volatility, and represent $3.3 billion of our investments as of December 31, 2019. A hypothetical adverse price change of 10%, which could be experienced in the near term, would decrease the fair value of our marketable equity securities by $330 million.

Our non-marketable equity securities not accounted for under the equity method are adjusted to fair value for observable transactions for identical or similar investments of the same issuer or impairment (referred to as the measurement alternative). The fair value is measured at the time of the observable transaction, which is not necessarily an indication of the current fair value as of the balance sheet date. These investments, especially those that are in the early stages, are inherently risky because the technologies or products these companies have under development are typically in the early phases and may never materialize and they may experience a decline in financial condition, which could result in a loss of a substantial part of our investment in these companies. The success of our investment in any private company is also typically dependent on the likelihood of our ability to realize appreciation in the value of our investments through liquidity events such as public offerings, acquisitions, private sales or other favorable market events. As of December 31, 2019, the carrying value of our non-marketable equity securities, which were accounted for under the measurement alternative, was $11.4 billion. Valuations of our equity investments in private companies are inherently more complex due to the lack of readily available market data. Volatility in the global economic climate and financial markets could result in a significant impairment charge on our non-marketable equity securities.

The carrying values of our equity method investments generally do not fluctuate based on market price changes, however these investments could be impaired if the carrying value exceeds the fair value.

For further information about our equity investments, please refer to Note 1 and Note 3 of the Notes to Consolidated Financial Statements included in Part II of this Annual Report on Form 10-K.

ITEM 8. FINANCIAL STATEMENTS AND SUPPLEMENTARY DATA

Alphabet Inc.

INDEX TO CONSOLIDATED FINANCIAL STATEMENTS

The supplementary financial information required by this Item 8 is included in Item 7 under the caption “Quarterly Results of Operations.”

REPORT OF ERNST & YOUNG LLP, INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

To the Stockholders and the Board of Directors of Alphabet Inc.

Opinion on the Financial Statements

We have audited the accompanying consolidated balance sheets of Alphabet Inc. (the Company) as of December 31, 2018 and 2019, the related consolidated statements of income, comprehensive income, stockholders' equity and cash flows for each of the three years in the period ended December 31, 2019, and the related notes and financial statement schedule listed in the Index at Item 15 (collectively referred to as the “financial statements”). In our opinion, the financial statements present fairly, in all material respects, the financial position of the Company at December 31, 2018 and 2019, and the results of its operations and its cash flows for each of the three years in the period ended December 31, 2019, in conformity with U.S. generally accepted accounting principles.

We also have audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States) (PCAOB), the Company's internal control over financial reporting as of December 31, 2019, based on criteria established in Internal Control—Integrated Framework issued by the Committee of Sponsoring Organizations of the Treadway Commission (2013 framework) and our report dated February 3, 2020 expressed an unqualified opinion thereon.

Adoption of New Accounting Standard

As discussed in Note 1 to the financial statements, the Company changed its method for accounting for the recognition, measurement, presentation and disclosure of certain equity securities in the year ended December 31, 2018.

Basis for Opinion

These financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on the Company’s financial statements based on our audits. We are a public accounting firm registered with the PCAOB and are required to be independent with respect to the Company in accordance with the U.S. federal securities laws and the applicable rules and regulations of the U.S. Securities and Exchange Commission and the PCAOB.

We conducted our audits in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement, whether due to error or fraud. Our audits included performing procedures to assess the risks of material misstatement of the financial statements, whether due to error or fraud, and performing procedures that respond to those risks. Such procedures included examining, on a test basis, evidence regarding the amounts and disclosures in the financial statements. Our audits also included evaluating the accounting principles used and significant estimates made by management, as well as evaluating the overall presentation of the financial statements. We believe that our audits provide a reasonable basis for our opinion.

Critical Audit Matter

The critical audit matter communicated below is a matter arising from the current period audit of the financial statements that was communicated or required to be communicated to the audit committee and that: (1) relates to accounts or disclosures that are material to the financial statements and (2) involved our especially challenging, subjective, or complex judgments. The communication of the critical audit matter does not alter in any way our opinion on the financial statements, taken as a whole, and we are not, by communicating the critical audit matter below, providing a separate opinion on the critical audit matter or on the accounts or disclosures to which it relates.

Loss Contingencies

Description of the Matter	The Company is regularly subject to claims, suits, and government investigations involving competition, intellectual property, privacy, consumer protection, tax, labor and employment, commercial disputes, content generated by its users, goods and services offered by advertisers or publishers using their platforms, and other matters. As described in Note 10 to the financial statements “Commitments and Contingencies” such claims could result in adverse consequences. Significant judgment is required to determine both the likelihood, and the estimated amount, of a loss related to such matters. Auditing management’s accounting for and disclosure of loss contingencies from these matters involved challenging and subjective auditor judgement in assessing the Company’s evaluation of the probability of a loss, and the estimated amount or range of loss.
How We Addressed the Matter in Our Audit	We tested relevant controls over the identified risks associated with management’s accounting for and disclosure of these matters. This included controls over management’s assessment of the probability of incurrence of a loss and whether the loss or range of loss was reasonably estimable and the development of related disclosures. Our audit procedures included gaining an understanding of previous rulings issued by regulators and the status of ongoing lawsuits, reviewing letters addressing the matters from internal and external legal counsel, meeting with internal legal counsel to discuss the allegations, and obtaining a representation letter from management on these matters. We also evaluated the Company’s disclosures in relation to these matters.

/s/ Ernst & Young LLP

We have served as the Company's auditor since 1999.

San Jose, California
February 3, 2020

REPORT OF ERNST & YOUNG LLP, INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

To the Stockholders and the Board of Directors of Alphabet Inc.

Opinion on Internal Control over Financial Reporting

We have audited Alphabet Inc.'s internal control over financial reporting as of December 31, 2019, based on criteria established in Internal Control-Integrated Framework issued by the Committee of Sponsoring Organizations of the Treadway Commission (2013 framework) (the COSO criteria). In our opinion, Alphabet Inc. (the Company) maintained, in all material respects, effective internal control over financial reporting as of December 31, 2019, based on the COSO criteria.

We also have audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States) (PCAOB), the 2019 consolidated financial statements of the Company and our report dated February 3, 2020 expressed an unqualified opinion thereon.

Basis for Opinion

The Company's management is responsible for maintaining effective internal control over financial reporting and for its assessment of the effectiveness of internal control over financial reporting included in the accompanying Management's Report on Internal Control over Financial Reporting. Our responsibility is to express an opinion on the Company's internal control over financial reporting based on our audit. We are a public accounting firm registered with the PCAOB and are required to be independent with respect to the Company in accordance with the U.S. federal securities laws and the applicable rules and regulations of the U.S. Securities and Exchange Commission and the PCAOB.

We conducted our audit in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether effective internal control over financial reporting was maintained in all material respects.

Our audit included obtaining an understanding of internal control over financial reporting, assessing the risk that a material weakness exists, testing and evaluating the design and operating effectiveness of internal control based on the assessed risk, and performing such other procedures as we considered necessary in the circumstances. We believe that our audit provides a reasonable basis for our opinion.

Definition and Limitations of Internal Control over Financial Reporting

A company's internal control over financial reporting is a process designed 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. A company's internal control over financial reporting includes those policies and procedures that (1) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the company; (2) provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with generally accepted accounting principles, and that receipts and expenditures of the company are being made only in accordance with authorizations of management and directors of the company; and (3) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use, or disposition of the company's assets that could have a material effect on the financial statements.

Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Also, projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

/s/ Ernst & Young LLP

San Jose, California
February 3, 2020

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, 2018	As of December 31, 2019
Assets		
Current assets:		
Cash and cash equivalents	$ 16,701	$ 18,498
Marketable securities	92,439	101,177
Total cash, cash equivalents, and marketable securities	109,140	119,675
Accounts receivable, net of allowance of $729 and $753	20,838	25,326
Income taxes receivable, net	355	2,166
Inventory	1,107	999
Other current assets	4,236	4,412
Total current assets	135,676	152,578
Non-marketable investments	13,859	13,078
Deferred income taxes	737	721
Property and equipment, net	59,719	73,646
Operating lease assets	0	10,941
Intangible assets, net	2,220	1,979
Goodwill	17,888	20,624
Other non-current assets	2,693	2,342
Total assets	$ 232,792	$ 275,909
Liabilities and Stockholders' Equity		
Current liabilities:		
Accounts payable	$ 4,378	$ 5,561
Accrued compensation and benefits	6,839	8,495
Accrued expenses and other current liabilities	16,958	23,067
Accrued revenue share	4,592	5,916
Deferred revenue	1,784	1,908
Income taxes payable, net	69	274
Total current liabilities	34,620	45,221
Long-term debt	4,012	4,554
Deferred revenue, non-current	396	358
Income taxes payable, non-current	11,327	9,885
Deferred income taxes	1,264	1,701
Operating lease liabilities	0	10,214
Other long-term liabilities	3,545	2,534
Total liabilities	55,164	74,467
Commitments and Contingencies (Note 10)		
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); 695,556 (Class A 299,242, Class B 46,636, Class C 349,678) and 688,335 (Class A 299,828, Class B 46,441, Class C 342,066) shares issued and outstanding	45,049	50,552
Accumulated other comprehensive loss	(2,306)	(1,232)
Retained earnings	134,885	152,122
Total stockholders' equity	177,628	201,442
Total liabilities and stockholders' equity	$ 232,792	$ 275,909

See accompanying notes.

Alphabet Inc.
CONSOLIDATED STATEMENTS OF INCOME
(In millions, except per share amounts)

	Year Ended December 31,		
	2017	2018	2019
Revenues	$ 110,855	$ 136,819	$ 161,857
Costs and expenses:			
Cost of revenues	45,583	59,549	71,896
Research and development	16,625	21,419	26,018
Sales and marketing	12,893	16,333	18,464
General and administrative	6,840	6,923	9,551
European Commission fines	2,736	5,071	1,697
Total costs and expenses	84,677	109,295	127,626
Income from operations	26,178	27,524	34,231
Other income (expense), net	1,015	7,389	5,394
Income before income taxes	27,193	34,913	39,625
Provision for income taxes	14,531	4,177	5,282
Net income	$ 12,662	$ 30,736	$ 34,343
Basic net income per share of Class A and B common stock and Class C capital stock	$ 18.27	$ 44.22	$ 49.59
Diluted net income per share of Class A and B common stock and Class C capital stock	$ 18.00	$ 43.70	$ 49.16

See accompanying notes.

Alphabet Inc.
CONSOLIDATED STATEMENTS OF COMPREHENSIVE INCOME
(In millions)

	Year Ended December 31,		
	2017	2018	2019
Net income	$ 12,662	$ 30,736	$ 34,343
Other comprehensive income (loss):			
Change in foreign currency translation adjustment	1,543	(781)	(119)
Available-for-sale investments:			
Change in net unrealized gains (losses)	307	88	1,611
Less: reclassification adjustment for net (gains) losses included in net income	105	(911)	(111)
Net change (net of tax effect of $0, $156, and $221)	412	(823)	1,500
Cash flow hedges:			
Change in net unrealized gains (losses)	(638)	290	22
Less: reclassification adjustment for net (gains) losses included in net income	93	98	(299)
Net change (net of tax effect of $247, $103, and $42)	(545)	388	(277)
Other comprehensive income (loss)	1,410	(1,216)	1,104
Comprehensive income	$ 14,072	$ 29,520	$ 35,447

See accompanying notes.

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

	Class A and Class B Common Stock, Class C Capital Stock and Additional Paid-In Capital		Accumulated Other Comprehensive Income (Loss)	Retained Earnings	Total Stockholders' Equity
	Shares	Amount			
Balance as of December 31, 2016	691,293	$ 36,307	$ (2,402)	$ 105,131	$ 139,036
Cumulative effect of accounting change	0	0	0	(15)	(15)
Common and capital stock issued	8,652	212	0	0	212
Stock-based compensation expense	0	7,694	0	0	7,694
Tax withholding related to vesting of restricted stock units	0	(4,373)	0	0	(4,373)
Repurchases of capital stock	(5,162)	(315)	0	(4,531)	(4,846)
Sale of interest in consolidated entities	0	722	0	0	722
Net income	0	0	0	12,662	12,662
Other comprehensive income (loss)	0	0	1,410	0	1,410
Balance as of December 31, 2017	694,783	40,247	(992)	113,247	152,502
Cumulative effect of accounting change	0	0	(98)	(599)	(697)
Common and capital stock issued	8,975	148	0	0	148
Stock-based compensation expense	0	9,353	0	0	9,353
Tax withholding related to vesting of restricted stock units and other	0	(4,782)	0	0	(4,782)
Repurchases of capital stock	(8,202)	(576)	0	(8,499)	(9,075)
Sale of interest in consolidated entities	0	659	0	0	659
Net income	0	0	0	30,736	30,736
Other comprehensive income (loss)	0	0	(1,216)	0	(1,216)
Balance as of December 31, 2018	695,556	45,049	(2,306)	134,885	177,628
Cumulative effect of accounting change	0	0	(30)	(4)	(34)
Common and capital stock issued	8,120	202	0	0	202
Stock-based compensation expense	0	10,890	0	0	10,890
Tax withholding related to vesting of restricted stock units and other	0	(4,455)	0	0	(4,455)
Repurchases of capital stock	(15,341)	(1,294)	0	(17,102)	(18,396)
Sale of interest in consolidated entities	0	160	0	0	160
Net income	0	0	0	34,343	34,343
Other comprehensive income (loss)	0	0	1,104	0	1,104
Balance as of December 31, 2019	688,335	$ 50,552	$ (1,232)	$ 152,122	$ 201,442

See accompanying notes.

Alphabet Inc.
CONSOLIDATED STATEMENTS OF CASH FLOWS
(In millions)

	Year Ended December 31,		
	2017	2018	2019
Operating activities			
Net income	$ 12,662	$ 30,736	$ 34,343
Adjustments:			
Depreciation and impairment of property and equipment	6,103	8,164	10,856
Amortization and impairment of intangible assets	812	871	925
Stock-based compensation expense	7,679	9,353	10,794
Deferred income taxes	258	778	173
(Gain) loss on debt and equity securities, net	37	(6,650)	(2,798)
Other	294	(189)	(592)
Changes in assets and liabilities, net of effects of acquisitions:			
Accounts receivable	(3,768)	(2,169)	(4,340)
Income taxes, net	8,211	(2,251)	(3,128)
Other assets	(2,164)	(1,207)	(621)
Accounts payable	731	1,067	428
Accrued expenses and other liabilities	4,891	8,614	7,170
Accrued revenue share	955	483	1,273
Deferred revenue	390	371	37
Net cash provided by operating activities	37,091	47,971	54,520
Investing activities			
Purchases of property and equipment	(13,184)	(25,139)	(23,548)
Purchases of marketable securities	(92,195)	(50,158)	(100,315)
Maturities and sales of marketable securities	73,959	48,507	97,825
Purchases of non-marketable investments	(1,745)	(2,073)	(1,932)
Maturities and sales of non-marketable investments	533	1,752	405
Acquisitions, net of cash acquired, and purchases of intangible assets	(287)	(1,491)	(2,515)
Proceeds from collection of notes receivable	1,419	0	0
Other investing activities	99	98	589
Net cash used in investing activities	(31,401)	(28,504)	(29,491)
Financing activities			
Net payments related to stock-based award activities	(4,166)	(4,993)	(4,765)
Repurchases of capital stock	(4,846)	(9,075)	(18,396)
Proceeds from issuance of debt, net of costs	4,291	6,766	317
Repayments of debt	(4,377)	(6,827)	(585)
Proceeds from sale of interest in consolidated entities	800	950	220
Net cash used in financing activities	(8,298)	(13,179)	(23,209)
Effect of exchange rate changes on cash and cash equivalents	405	(302)	(23)
Net increase (decrease) in cash and cash equivalents	(2,203)	5,986	1,797
Cash and cash equivalents at beginning of period	12,918	10,715	16,701
Cash and cash equivalents at end of period	$ 10,715	$ 16,701	$ 18,498
Supplemental disclosures of cash flow information			
Cash paid for taxes, net of refunds	$ 6,191	$ 5,671	$ 8,203

See accompanying notes.

Alphabet Inc.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

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

Nature of Operations

Google was incorporated in California in September 1998 and re-incorporated in the State of Delaware in August 2003. In 2015, we implemented a holding company reorganization, and as a result, Alphabet 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 entities consolidated under the variable interest and voting models. Noncontrolling interests are not presented separately as the amounts are not material. All intercompany balances and transactions have been eliminated.

Use of Estimates

Preparation of consolidated financial statements in conformity with generally accepted accounting principles in the United States (GAAP) requires us to make estimates and assumptions that affect the amounts reported and disclosed in the financial statements and the accompanying notes. Actual results could differ materially from these estimates. On an ongoing basis, we evaluate our estimates, including those related to the bad debt allowance, 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.

Revenue Recognition

We recognize revenues when we transfer control of promised goods or services to our customers in an amount that reflects the consideration to which we expect to be entitled to in exchange for those goods or services.

See Note 2 for further discussion on Revenues.

Cost of Revenues

Cost of revenues consists of TAC and other costs of revenues.

TAC represents the amounts 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.

Other cost of revenues (which is the cost of revenues excluding TAC) includes the following:

- Content acquisition costs primarily related to payments to content providers from whom we license video and other content for distribution on YouTube and Google Play (we pay fees to these content providers based on revenues generated or a flat fee);
- Expenses associated with our data centers and other operations (including bandwidth, compensation expense (including SBC), depreciation, energy, and other equipment costs); and
- Inventory related costs for hardware we sell.

Stock-based Compensation

Stock-based compensation primarily consists of Alphabet restricted stock units (RSUs). RSUs are equity classified and measured at the fair market value of the underlying stock at the grant date. We recognize RSU expense using the straight-line attribution method over the requisite service period and account for forfeitures as they occur.

For RSUs, shares are issued on the vesting dates net of the applicable statutory tax withholding to be paid by us on behalf of our employees. As a result, fewer shares are issued than the number of RSUs outstanding and the tax withholding is recorded as a reduction to additional paid-in capital.

Additionally, stock-based compensation includes stock-based awards, such as performance stock units (PSUs) and awards that may be settled in cash or the stock of certain of our Other Bets. PSUs are equity classified and expense is recognized over the requisite service period. Awards that are liability classified are remeasured at fair value through settlement or maturity (six months and one day after vesting). The fair value of such awards is based on the equity valuation of the respective Other Bet.

Performance Fees

We have compensation arrangements with payouts based on realized investment returns. We recognize compensation expense based on the estimated payouts, which may result in expense recognized before investment returns are realized. Performance fees, which are primarily related to gains on equity securities, are recorded as a component of other income (expense), net.

Certain Risks and Concentrations

Our revenues are primarily derived from online advertising, the market for which is highly competitive and rapidly changing. In addition, our revenues are generated from a multitude of markets in countries around the world. Significant changes in this industry or changes in customer buying or advertiser spending behavior could adversely affect our operating results.

No individual customer or groups of affiliated customers represented more than 10% of our revenues in 2017, 2018, or 2019. In 2017, 2018, and 2019, we generated approximately 47%, 46%, and 46% of our revenues, respectively, from customers based in the U.S.

We are subject to concentrations of credit risk principally from cash and cash equivalents, marketable securities, foreign exchange contracts, and accounts receivable. We manage our credit risk exposure through timely assessment of our counterparty creditworthiness, credit limits and use of collateral management.

Cash equivalents and marketable securities consist primarily 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, mortgage-backed securities, and asset-backed securities. Foreign exchange contracts are transacted with various financial institutions with high credit standing. Accounts receivable are typically unsecured and are derived from revenues earned from customers located around the world. We perform ongoing evaluations to determine customer credit and we limit the amount of credit we extend. We generally do not require collateral from our customers. We maintain reserves for estimated credit losses and these losses have generally been within our expectations.

Fair Value of Financial Instruments

Our financial assets and liabilities that are measured at fair value on a recurring basis include cash equivalents, marketable securities, derivative contracts, and non-marketable debt securities. Our financial assets measured at fair value on a nonrecurring basis include non-marketable equity securities, which are adjusted to fair value when observable price changes are identified or when the non-marketable equity securities are impaired (referred to as the measurement alternative). Other financial assets and liabilities are carried at cost with fair value disclosed, if required.

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 - 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.

Cash, Cash Equivalents, and Marketable Securities

We invest all excess cash primarily in government bonds, corporate debt securities, mortgage-backed and asset-backed securities, time deposits, and money market funds.

We classify all marketable investments that have stated maturities of three months or less from the date of purchase as cash equivalents and those with stated maturities of greater than three months as marketable securities.

We determine the appropriate classification of our investments in marketable securities at the time of purchase and reevaluate such designation at each balance sheet date. We have classified and accounted for our marketable debt securities as available-for-sale. After consideration of our risk versus reward objectives, as well as our liquidity requirements, we may sell these debt securities prior to their stated maturities. As we view these securities as available to support current operations, we classify highly liquid securities with maturities beyond 12 months as current assets under the caption marketable securities on the Consolidated Balance Sheets. We carry these securities at fair value, and report the unrealized gains and losses, net of taxes, as a component of stockholders' equity, except for unrealized losses determined to be other-than-temporary, which we record within other income (expense), net. We determine any realized gains or losses on the sale of marketable debt securities on a specific identification method, and we record such gains and losses as a component of other income (expense), net.

Non-Marketable Investments

We account for non-marketable equity investments through which we exercise significant influence but do not have control over the investee under the equity method. Our non-marketable equity securities not accounted for under the equity method are primarily accounted for under the measurement alternative in accordance with Accounting Standards Update No. 2016-01, which we adopted on January 1, 2018. Under the measurement alternative, the carrying value of our non-marketable equity investments is adjusted to fair value for observable transactions for identical or similar investments of the same issuer or impairment. Adjustments are determined primarily based on a market approach as of the transaction date.

We account for our non-marketable investments that meet the definition of a debt security as available-for-sale securities.

We classify our non-marketable investments that do not have stated contractual maturity dates, as non-current assets on the Consolidated Balance Sheets.

Impairment of Investments

We periodically review our debt and equity investments for impairment. For debt securities we consider the duration, severity and the reason for the decline in security value; whether it is more likely than not that we will be required to sell the security before recovery of its amortized cost basis; or if the amortized cost basis cannot be recovered as a result of credit losses. If any impairment is considered other-than-temporary, we will write down the security to its fair value and record the corresponding charge as other income (expense), net. For equity securities we consider impairment indicators such as negative changes in industry and market conditions, financial performance, business prospects, and other relevant events and factors. If indicators exist and the fair value of the security is below the carrying amount, we write down the security to fair value.

Variable Interest Entities

We determine at the inception of each arrangement whether an entity in which we have made an investment or in which we have other variable interests in is considered a variable interest entity (VIE). We consolidate VIEs when we are the primary beneficiary. The primary beneficiary of a VIE is the party that meets both of the following criteria: (1) has the power to make decisions that most significantly affect the economic performance of the VIE; and (2) has the obligation to absorb losses or the right to receive benefits that in either case could potentially be significant to the VIE. Periodically, we assess whether any changes in our interest or relationship with the entity affect our determination of whether the entity is still a VIE and, if so, whether we are the primary beneficiary. If we are not the primary beneficiary in a VIE, we account for the investment or other variable interests in a VIE in accordance with applicable GAAP.

Accounts Receivable

We record accounts receivable at the invoiced amount. We maintain an allowance for doubtful accounts to reserve for potentially uncollectible receivables. We review the accounts receivable by amounts due from customers that are past due to identify specific customers with known disputes or collectability issues. In determining the amount of the reserve, we make judgments about the creditworthiness of significant customers based on ongoing credit evaluations.

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.

Leases

We determine if an arrangement is a lease at inception. Our lease agreements generally contain lease and non-lease components. Payments under our lease arrangements are primarily fixed. Non-lease components primarily include payments for maintenance and utilities. We combine fixed payments for non-lease components with lease payments and account for them together as a single lease component which increases the amount of our lease assets and liabilities.

Certain lease agreements contain variable payments, which are expensed as incurred and not included in the lease assets and liabilities. These amounts include payments affected by the Consumer Price Index, payments contingent on wind or solar production for power purchase arrangements, and payments for maintenance and utilities.

Lease assets and liabilities are recognized at the present value of the future lease payments at the lease commencement date. The interest rate used to determine the present value of the future lease payments is our incremental borrowing rate, because the interest rate implicit in our leases is not readily determinable. Our incremental borrowing rate is estimated to approximate the interest rate on a collateralized basis with similar terms and payments, and in economic environments where the leased asset is located. Our lease terms include periods under options to extend or terminate the lease when it is reasonably certain that we will exercise that option. We generally use the base, non-cancelable, lease term when determining the lease assets and liabilities. Lease assets also include any prepaid lease payments and lease incentives.

Operating lease assets and liabilities are included on our Consolidated Balance Sheet beginning January 1, 2019. The current portion of our operating lease liabilities is included in accrued expenses and other current liabilities and the long term portion is included in operating lease liabilities. Finance lease assets are included in property and equipment, net. Finance lease liabilities are included in accrued expenses and other current liabilities or long-term debt.

Operating lease expense is recognized on a straight-line basis over the lease term.

Property and Equipment

Property and equipment includes the following categories: land and buildings, information technology assets, construction in progress, leasehold improvements, and furniture and fixtures. Land and buildings include land, offices, data centers and related building improvements. Information technology assets include servers and network equipment. We account for property and equipment at cost less accumulated depreciation. We compute depreciation using the straight-line method over the estimated useful lives of the assets. We depreciate buildings over periods of seven to 25 years. We depreciate information technology assets generally over periods of three to five years (specifically, three years for servers and three to five years for network equipment).

We depreciate leasehold improvements over the shorter of the remaining lease term or the estimated useful lives of the assets. Construction in progress is the construction or development of property and equipment that have not yet been placed in service for our intended use. Depreciation for equipment, buildings, and leasehold improvements commences once they are ready for our intended use. Land is not depreciated.

Inventory

Inventory consists primarily of finished goods and is stated at the lower of cost and net realizable value. Cost is computed using the first-in, first-out method.

Software Development Costs

We expense software development costs, including costs to develop software products or the software component of products to be sold, leased, or marketed to external users, before technological feasibility is reached. Technological feasibility is typically reached shortly before the release of such products and as a result, development costs that meet the criteria for capitalization were not material for the periods presented.

Software development costs also include costs to develop software to be used solely to meet internal needs and cloud based applications used to deliver our services. We capitalize development costs related to these software applications once the preliminary project stage is complete and it is probable that the project will be completed and the software will be used to perform the function intended. Costs capitalized for developing such software applications were not material for the periods presented.

Business Combinations

We include the results of operations of the businesses that we acquire as of the acquisition date. We allocate the purchase price of the acquisitions to the assets acquired and liabilities assumed based on their estimated fair values. The excess of the purchase price over the fair values of identifiable assets and liabilities is recorded as goodwill. Acquisition-related expenses are recognized separately from the business combination and are expensed as incurred.

Long-Lived Assets, Goodwill and Other Acquired Intangible Assets

We review property and equipment, long-term prepayments and intangible assets, excluding goodwill, for impairment when events or changes in circumstances indicate the carrying amount may not be recoverable. We measure recoverability of these assets by comparing the carrying amounts to the future undiscounted cash flows that the assets or the asset group are expected to generate. If the carrying value of the assets are not recoverable, the impairment recognized is measured as the amount by which the carrying value of the asset exceeds its fair value. Impairments were not material for the periods presented.

We allocate goodwill to reporting units based on the expected benefit from the business combination. We evaluate our reporting units when changes in our operating structure occur, and if necessary, reassign goodwill using a relative fair value allocation approach. We test our goodwill for impairment at least annually, or more frequently if events or changes in circumstances indicate that the asset may be impaired. Goodwill impairments were not material for the periods presented.

Intangible assets with definite lives are amortized over their estimated useful lives. We amortize intangible assets on a straight-line basis with definite lives generally over periods ranging from one to twelve years.

Income Taxes

We account for income taxes using the asset and liability method, under which we recognize the amount of taxes payable or refundable for the current year and deferred tax assets and liabilities for the future tax consequences of events that have been recognized in our financial statements or tax returns. We measure current and deferred tax assets and liabilities based on provisions of enacted tax law. We evaluate the realization of our deferred tax assets based on all available evidence and establish a valuation allowance to reduce deferred tax assets when it is more likely than not that they will not be realized.

We recognize the financial statement effects of a tax position when it is more likely than not that, based on technical merits, the position will be sustained upon examination. The tax benefits of the position recognized in the financial statements are then measured based on the largest amount of benefit that is greater than 50% likely to be realized upon settlement with a taxing authority. In addition, we recognize interest and penalties related to unrecognized tax benefits as a component of the income tax provision.

Foreign Currency

Generally, the functional currency of our international subsidiaries is the local currency. We translate the financial statements of these subsidiaries to U.S. dollars using month-end exchange rates for assets and liabilities, and average rates for the annual period derived from month-end exchange rates for revenues, costs, and expenses. We record translation gains and losses in accumulated other comprehensive income (AOCI) as a component of stockholders' equity. We reflect net foreign exchange transaction gains and losses resulting from the conversion of the transaction currency to functional currency as a component of foreign currency exchange gain (loss) in other income (expense), net.

Advertising and Promotional Expenses

We expense advertising and promotional costs in the period in which they are incurred. For the years ended December 31, 2017, 2018 and 2019, advertising and promotional expenses totaled approximately $5.1 billion, $6.4 billion, and $6.8 billion, respectively.

Recent Accounting Pronouncements

Recently issued accounting pronouncements not yet adopted

In June 2016, the Financial Accounting Standards Board (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 model which requires the use of forward-looking information to calculate credit loss estimates. It also eliminates the concept of other-than-temporary impairment and requires credit losses related to available-for-sale debt securities to be recorded through an allowance for credit losses rather than as a reduction in the amortized cost basis of the securities. These changes will result in earlier recognition of credit losses. We will adopt ASU 2016-13 effective January 1, 2020 with the cumulative effect of adoption recorded as an adjustment to retained earnings. The effect on our consolidated financial statements and related disclosures is not expected to be material.

Recently adopted accounting pronouncements

In February 2016, the FASB issued Accounting Standards Update No. 2016-02 (Topic 842) "Leases." Topic 842 supersedes the lease requirements in Accounting Standards Codification 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 continue to be classified as either finance or operating. We adopted Topic 842 effective January 1, 2019. The most significant effects of Topic 842 were the recognition of $8.0 billion of operating lease assets and $8.4 billion of operating lease liabilities and the de-recognition of $1.5 billion of build-to-suit assets and liabilities upon adoption. We applied Topic 842 to all leases as of January 1, 2019 with comparative periods continuing to be reported under Topic 840. In the adoption of Topic 842, we carried forward the assessment from Topic 840 of whether our contracts contain or are leases, the classification of our leases, and remaining lease terms. Our accounting for finance leases remains substantially unchanged. The standard did not have a significant effect on our consolidated results of operations or cash flows. See Note 4 for further details.

Prior Period Reclassifications

Certain amounts in prior periods have been reclassified to conform with current period presentation. Hedging gains (losses), which were previously included in Google revenues, are now reported separately as a component of total revenues for all periods presented. See Note 2 for further details.

Additionally, performance fees have been reclassified for all periods from general and administrative expenses to other income (expense), net to align with the presentation of the investment gains and losses on which the performance fees are based. See Note 7 for further details.

Note 2. Revenues

Revenue Recognition

Revenues are recognized when control of the promised goods or services is transferred to our customers, in an amount that we expect in exchange for those goods or services. Sales and other similar taxes are excluded from revenues.

The following table presents our revenues disaggregated by type (in millions). Certain amounts in prior periods have been reclassified to conform with current period presentation.

	Year Ended December 31,		
	2017	2018	2019
Google Search & other	$ 69,811	$ 85,296	$ 98,115
YouTube ads[(1)]	8,150	11,155	15,149
Google properties	77,961	96,451	113,264
Google Network Members' properties	17,616	20,010	21,547
Google advertising	95,577	116,461	134,811
Google Cloud	4,056	5,838	8,918
Google other[(1)]	10,914	14,063	17,014
Google revenues	110,547	136,362	160,743
Other Bets revenues	477	595	659
Hedging gains (losses)	(169)	(138)	455
Total revenues	$ 110,855	$ 136,819	$ 161,857

(1) YouTube non-advertising revenues are included in Google other revenues.

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

	Year Ended December 31,					
	2017		2018		2019	
United States	$ 52,449	47%	$ 63,269	46%	$ 74,843	46%
EMEA[(1)]	36,236	33	44,739	33	50,645	31
APAC[(1)]	16,192	15	21,341	15	26,928	17
Other Americas[(1)]	6,147	5	7,608	6	8,986	6
Hedging gains (losses)	(169)	0	(138)	0	455	0
Total revenues	$ 110,855	100%	$ 136,819	100%	$ 161,857	100%

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

Advertising Revenues

We generate advertising revenues primarily by delivering advertising on Google properties, including Google.com, the Google Search app, YouTube, Google Play, Gmail and Google Maps; and Google Network Members' properties.

Our customers generally purchase advertising inventory through Google Ads, Google Ad Manager as part of the Authorized Buyers marketplace, and Google Marketing Platform, among others.

We offer advertising on a click, impression or view basis. We recognize revenue each time a user clicks on the ad, when the ad is displayed or a user views the ad.

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.

Google Cloud Revenues

Google Cloud revenues consist primarily of revenues from Google Cloud Platform (which includes infrastructure and data and analytics platform products, and other services), G Suite productivity tools and other enterprise cloud services. Our cloud revenues are provided on either a consumption or subscription basis. Revenue related to cloud services provided on a consumption basis is recognized when the customer utilizes the services, based on the quantity of services consumed. Revenue related to cloud services provided on a subscription basis is recognized ratably over the contract term as the customer receives and consumes the benefits of the cloud services.

Other Revenues

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

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

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 revenues 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.

Customer Incentives and Credits

Certain customers 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. We believe that there will not be significant changes to our estimates of variable consideration.

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 year ended December 31, 2019 was primarily driven by cash payments received or due in advance of satisfying our performance obligations, offset by $1.7 billion of revenues recognized that were included in the deferred revenue balance as of December 31, 2018.

Additionally, we have performance obligations associated with commitments in customer contracts, primarily related to Google Cloud, for future services that have not yet been recognized in revenue. This includes related deferred revenue currently recorded and amounts that will be invoiced in future periods. As of December 31, 2019, the amount not yet recognized in revenue from these commitments is $11.4 billion, which reflects our assessment of relevant contract terms. This amount excludes contracts (i) 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. We expect to recognize approximately two thirds over the next 24 months with the remaining thereafter. However, the amount and timing of revenue recognition is largely driven by customer utilization, which could impact our estimate of the remaining amount of commitments and when we expect to recognize such revenues.

Sales Commissions

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.

Note 3. Financial Instruments

Debt Securities

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

The following tables summarize our debt securities by significant investment categories as of December 31, 2018 and 2019 (in millions):

	As of December 31, 2018					
	Adjusted Cost	Gross Unrealized Gains	Gross Unrealized Losses	Fair Value	Cash and Cash Equivalents	Marketable Securities
Level 2:						
Time deposits[(1)]	$ 2,202	$ 0	$ 0	$ 2,202	$ 2,202	$ 0
Government bonds	53,634	71	(414)	53,291	3,717	49,574
Corporate debt securities	25,383	15	(316)	25,082	44	25,038
Mortgage-backed and asset-backed securities	16,918	11	(324)	16,605	0	16,605
Total	$ 98,137	$ 97	$ (1,054)	$ 97,180	$ 5,963	$ 91,217

	As of December 31, 2019					
	Adjusted Cost	Gross Unrealized Gains	Gross Unrealized Losses	Fair Value	Cash and Cash Equivalents	Marketable Securities
Level 2:						
Time deposits[1]	$ 2,294	$ 0	$ 0	$ 2,294	$ 2,294	$ 0
Government bonds	55,033	434	(30)	55,437	4,518	50,919
Corporate debt securities	27,164	337	(3)	27,498	44	27,454
Mortgage-backed and asset-backed securities	19,453	96	(41)	19,508	0	19,508
Total	$103,944	$ 867	$ (74)	$104,737	$ 6,856	$ 97,881

(1) The majority of our time deposits are domestic deposits.

We determine realized gains or losses on the sale or extinguishment of debt securities on a specific identification method. We recognized gross realized gains of $185 million, $1.3 billion, and $292 million for the years ended December 31, 2017, 2018, and 2019, respectively. We recognized gross realized losses of $295 million, $143 million, and $143 million for the years ended December 31, 2017, 2018, and 2019, respectively. We reflect these gains and losses as a component of other income (expense), net, in the Consolidated Statements of Income.

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

	As of December 31, 2019
Due in 1 year	$ 20,392
Due in 1 year through 5 years	63,151
Due in 5 years through 10 years	2,671
Due after 10 years	11,667
Total	$ 97,881

The following tables present gross unrealized losses and fair values for those investments that were in an unrealized loss position as of December 31, 2018 and 2019, 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, 2018					
	Less than 12 Months		12 Months or Greater		Total	
	Fair Value	Unrealized Loss	Fair Value	Unrealized Loss	Fair Value	Unrealized Loss
Government bonds	$ 12,019	$ (85)	$ 23,877	$ (329)	$ 35,896	$ (414)
Corporate debt securities	10,171	(107)	11,545	(209)	21,716	(316)
Mortgage-backed and asset-backed securities	5,534	(75)	8,519	(249)	14,053	(324)
Total	$ 27,724	$ (267)	$ 43,941	$ (787)	$ 71,665	$ (1,054)

	As of December 31, 2019					
	Less than 12 Months		12 Months or Greater		Total	
	Fair Value	Unrealized Loss	Fair Value	Unrealized Loss	Fair Value	Unrealized Loss
Government bonds	$ 6,752	$ (20)	$ 4,590	$ (10)	$ 11,342	$ (30)
Corporate debt securities	1,665	(2)	978	(1)	2,643	(3)
Mortgage-backed and asset-backed securities	4,536	(13)	2,835	(28)	7,371	(41)
Total	$ 12,953	$ (35)	$ 8,403	$ (39)	$ 21,356	$ (74)

During the years ended December 31, 2017, 2018 and 2019, we did not recognize any significant other-than-temporary impairment losses.

Equity Investments

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

Our marketable equity securities are publicly traded stocks or funds measured at fair value and classified within Level 1 and 2 in the fair value hierarchy because we use quoted prices for identical assets in active markets or inputs that are based upon quoted prices for similar instruments in active markets. All gains and losses on marketable equity securities, realized and unrealized, are recognized in other income (expense), net.

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

Gains and losses on marketable and non-marketable equity securities

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

	Year Ended December 31,	
	2018	2019
Net gain (loss) on equity securities sold during the period	$ 1,458	$ (301)
Net unrealized gain (loss) on equity securities held as of the end of the period[1]	4,002	2,950
Total gain (loss) recognized in other income (expense), net	$ 5,460	$ 2,649

(1) Includes net gains of $4.1 billion and $1.8 billion related to non-marketable equity securities for the years ended December 31, 2018 and 2019, respectively.

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

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

	Equity Securities Sold During the Year Ended December 31,	
	2018	2019
Total sale price	$ 1,965	$ 3,134
Total initial cost	515	858
Cumulative net gains	$ 1,450	$ 2,276

Carrying value of marketable and non-marketable equity securities

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

	As of December 31, 2018		
	Marketable Securities	Non-Marketable Securities	Total
Total initial cost	$ 1,168	$ 8,168	$ 9,336
Cumulative net gain[(1)]	54	4,107	4,161
Carrying value	$ 1,222	$ 12,275	$ 13,497

(1) Non-marketable securities cumulative net gain is comprised of $4.3 billion unrealized gains and $178 million unrealized losses (including impairment).

	As of December 31, 2019		
	Marketable Securities	Non-Marketable Securities	Total
Total initial cost	$ 1,935	$ 8,297	$ 10,232
Cumulative net gain[(1)]	1,361	3,056	4,417
Carrying value	$ 3,296	$ 11,353	$ 14,649

(1) Non-marketable securities cumulative net gain is comprised of $3.5 billion unrealized gains and $445 million unrealized losses (including impairment).

Marketable equity securities

The following table summarizes marketable equity securities measured at fair value by significant investment categories as of December 31, 2018 and 2019 (in millions):

	As of December 31, 2018		As of December 31, 2019	
	Cash and Cash Equivalents	Marketable Securities	Cash and Cash Equivalents	Marketable Securities
Level 1:				
Money market funds	$ 3,493	$ 0	$ 4,604	$ 0
Marketable equity securities[(1)]	0	994	0	3,046
	3,493	994	4,604	3,046
Level 2:				
Mutual funds	0	228	0	250
Total	$ 3,493	$ 1,222	$ 4,604	$ 3,296

(1) The balance as of December 31, 2019 includes investments that were reclassified from non-marketable equity securities following the initial public offering of the issuers.

Non-marketable equity securities

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

	Year Ended December 31,	
	2018	2019
Unrealized gains	$ 4,285	$ 2,163
Unrealized losses (including impairment)	(178)	(372)
Total unrealized gain (loss) for non-marketable equity securities	$ 4,107	$ 1,791

During the year ended December 31, 2019, included in the $11.4 billion of non-marketable equity securities, $7.6 billion were measured at fair value primarily based on observable market transactions, resulting in a net unrealized gain of $1.8 billion.

Equity securities accounted for under the Equity Method

Equity securities accounted for under the equity method had a carrying value of approximately $1.3 billion as of December 31, 2018 and 2019. Our share of gains and losses including impairment are included as a component of other income (expense), net, in the Consolidated Statements of Income. See Note 7 for further details on other income (expense), net.

Derivative Financial Instruments

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.

We recognize derivative instruments as either assets or liabilities in the Consolidated Balance Sheets at fair value. We record changes in the fair value (i.e., gains or losses) of the derivatives in the Consolidated Statements of Income as either other income (expense), net, or revenues, or in the Consolidated Balance Sheets in AOCI, as discussed below. Any components excluded from the assessment of hedge effectiveness are recognized in the same income statement line as the hedged item.

We enter into foreign currency contracts with financial institutions to reduce the risk that our cash flows, earnings, and investment in foreign subsidiaries will be adversely affected by foreign currency exchange rate fluctuations. We also use 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, 2018 and 2019, we received cash collateral related to the derivative instruments under our collateral security arrangements of $327 million and $252 million, respectively, which was included in other current assets.

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. The notional principal of these contracts was approximately $11.8 billion and $13.2 billion as of December 31, 2018 and 2019, respectively. These contracts have maturities of 24 months or less.

For forwards and option contracts, we exclude the change in the forward points and time value from our assessment of hedge effectiveness. The initial value of the excluded component is amortized on a straight-line basis over the life of the hedging instrument and recognized in revenues. The difference between fair value changes of the excluded component and the amount amortized to revenues is recorded in AOCI. We reflect the gains or losses of a cash flow hedge included in our hedge effective assessment as a component of AOCI and subsequently reclassify these gains and losses to revenues 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.

As of December 31, 2019, the net accumulated loss on our foreign currency cash flow hedges before tax effect was $82 million, of which $82 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. We recognize changes in the excluded component in other income (expense), net. The notional principal of these contracts was $2.0 billion and $455 million as of December 31, 2018 and 2019, 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.

Net Investment Hedges

We use forward contracts designated as net investment hedges to hedge the foreign currency risks related to our investment in foreign subsidiaries. We exclude changes in forward points for the forward contracts from the assessment of hedge effectiveness. We recognize changes in the excluded component in other income (expense), net. The notional principal of these contracts was $6.7 billion and $9.3 billion as of December 31, 2018 and 2019, respectively.

Gains and losses on these forward contracts are recognized in AOCI as part of the foreign currency translation adjustment.

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 $20.1 billion and $43.5 billion as of December 31, 2018 and 2019, respectively.

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

		As of December 31, 2018		
	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	$ 459	$ 54	$ 513
Total		$ 459	$ 54	$ 513
Derivative Liabilities:				
Level 2:				
Foreign exchange contracts	Accrued expenses and other liabilities, current and non-current	$ 5	$ 228	$ 233
Total		$ 5	$ 228	$ 233

		As of December 31, 2019		
	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	$ 91	$ 253	$ 344
Total		$ 91	$ 253	$ 344
Derivative Liabilities:				
Level 2:				
Foreign exchange contracts	Accrued expenses and other liabilities, current and non-current	$ 173	$ 196	$ 369
Total		$ 173	$ 196	$ 369

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

	Gains (Losses) Recognized in OCI on Derivatives Before Tax Effect		
	Year Ended December 31,		
	2017	2018	2019
Derivatives in Cash Flow Hedging Relationship:			
Foreign exchange contracts			
Amount included in the assessment of effectiveness	$ (955)	$ 332	$ 38
Amount excluded from the assessment of effectiveness	0	26	(14)
Derivatives in Net Investment Hedging Relationship:			
Foreign exchange contracts			
Amount included in the assessment of effectiveness	0	136	131
Total	$ (955)	$ 494	$ 155

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

	Gains (Losses) Recognized in Income					
	Year Ended December 31,					
	2017		2018		2019	
	Revenues	Other income (expense), net	Revenues	Other income (expense), net	Revenues	Other income (expense), net
Total amounts presented in the Consolidated Statements of Income in which the effects of cash flow and fair value hedges are recorded	$110,855	$ 1,015	$136,819	$ 7,389	$161,857	$ 5,394
Gains (Losses) on Derivatives in Cash Flow Hedging Relationship:						
Foreign exchange contracts						
Amount of gains (losses) reclassified from AOCI to income	$ (169)	$ 0	$ (139)	$ 0	$ 367	$ 0
Amount excluded from the assessment of effectiveness recognized in earnings based on an amortization approach	0	0	1	0	88	0
Amount excluded from the assessment of effectiveness	0	83	0	0	0	0
Gains (Losses) on Derivatives in Fair Value Hedging Relationship:						
Foreign exchange contracts						
Hedged items	0	197	0	(96)	0	(19)
Derivatives designated as hedging instruments	0	(197)	0	96	0	19
Amount excluded from the assessment of effectiveness	0	23	0	37	0	25
Gains (Losses) on Derivatives in Net Investment Hedging Relationship:						
Foreign exchange contracts						
Amount excluded from the assessment of effectiveness	0	0	0	78	0	243
Gains (Losses) on Derivatives Not Designated as Hedging Instruments:						
Foreign exchange contracts						
Derivatives not designated as hedging instruments	0	(230)	0	54	0	(413)
Total gains (losses)	$ (169)	$ (124)	$ (138)	$ 169	$ 455	$ (145)

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, 2018 and 2019, information related to these offsetting arrangements were as follows (in millions):

Offsetting of Assets

	As of December 31, 2018						
				Gross Amounts Not Offset in the Consolidated Balance Sheets, but Have Legal Rights to Offset			
	Gross Amounts of Recognized Assets	Gross Amounts Offset in the Consolidated Balance Sheets	Net Presented in the Consolidated Balance Sheets	Financial Instruments	Cash Collateral Received	Non-Cash Collateral Received	Net Assets Exposed
Derivatives	$ 569	$ (56)	$ 513	$ (90) [1]	$ (307)	$ (14)	$ 102

	As of December 31, 2019						
				Gross Amounts Not Offset in the Consolidated Balance Sheets, but Have Legal Rights to Offset			
	Gross Amounts of Recognized Assets	Gross Amounts Offset in the Consolidated Balance Sheets	Net Presented in the Consolidated Balance Sheets	Financial Instruments	Cash Collateral Received	Non-Cash Collateral Received	Net Assets Exposed
Derivatives	$ 365	$ (21)	$ 344	$ (88) [1]	$ (234)	$ 0	$ 22

(1) The balances as of December 31, 2018 and 2019 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, 2018						
				Gross Amounts Not Offset in the Consolidated Balance Sheets, but Have Legal Rights to Offset			
	Gross Amounts of Recognized Liabilities	Gross Amounts Offset in the Consolidated Balance Sheets	Net Presented in the Consolidated Balance Sheets	Financial Instruments	Cash Collateral Pledged	Non-Cash Collateral Pledged	Net Liabilities
Derivatives	$ 289	$ (56)	$ 233	$ (90) [2]	$ 0	$ 0	$ 143

	As of December 31, 2019						
				Gross Amounts Not Offset in the Consolidated Balance Sheets, but Have Legal Rights to Offset			
	Gross Amounts of Recognized Liabilities	Gross Amounts Offset in the Consolidated Balance Sheets	Net Presented in the Consolidated Balance Sheets	Financial Instruments	Cash Collateral Pledged	Non-Cash Collateral Pledged	Net Liabilities
Derivatives	$ 390	$ (21)	$ 369	$ (88) [2]	$ 0	$ 0	$ 281

(2) The balances as of December 31, 2018 and 2019 were related to derivative assets which are allowed to be net settled against derivative liabilities in accordance with our master netting agreements.

Note 4. Leases

We have entered into operating and finance lease agreements primarily for data centers, land and offices throughout the world with lease periods expiring between 2020 and 2063.

Components of operating lease expense were as follows (in millions):

	Year Ended December 31, 2019
Operating lease cost	$ 1,820
Variable lease cost	541
Total operating lease cost	$ 2,361

Supplemental information related to operating leases was as follows (in millions):

	Year Ended December 31, 2019
Cash payments for operating leases	$ 1,661
New operating lease assets obtained in exchange for operating lease liabilities	$ 4,391

As of December 31, 2019, our operating leases had a weighted average remaining lease term of 10 years and a weighted average discount rate of 2.8%. Future lease payments under operating leases as of December 31, 2019 were as follows (in millions):

2020	$ 1,757
2021	1,845
2022	1,680
2023	1,508
2024	1,301
Thereafter	5,763
Total future lease payments	13,854
Less imputed interest	(2,441)
Total lease liability balance	$ 11,413

As of December 31, 2019, we have entered into leases that have not yet commenced with future lease payments of $7.4 billion, excluding purchase options, that are not yet recorded on our Consolidated Balance Sheets. These leases will commence between 2020 and 2026 with non-cancelable lease terms of 1 to 25 years.

Supplemental Information for Comparative Periods

As of December 31, 2018, prior to the adoption of Topic 842, future minimum payments under operating leases having initial or remaining non-cancelable lease terms in excess of one year, net of sublease income amounts, were as follows (in millions):

	Operating Leases[(1)]	Sub-lease Income	Net Operating Leases
2019	$ 1,319	$ 16	$ 1,303
2020	1,397	13	1,384
2021	1,337	10	1,327
2022	1,153	8	1,145
2023	980	3	977
Thereafter	3,916	5	3,911
Total minimum payments	$ 10,102	$ 55	$ 10,047

(1) Includes future minimum payments for leases which have not yet commenced.

Rent expense under operating leases was $1.1 billion and $1.3 billion for the years ended December 31, 2017, and 2018, respectively.

Note 5. Variable Interest Entities (VIEs)

Consolidated VIEs

We consolidate VIEs in which we hold a variable interest and are the primary beneficiary. We are the primary beneficiary because we have the power to direct activities that most significantly affect their economic performance and have the obligation to absorb the majority of their losses or benefits. The results of operations and financial position of these VIEs are included in our consolidated financial statements.

For certain consolidated VIEs, their assets are not available to us and their creditors do not have recourse to us. As of December 31, 2018 and 2019, assets that can only be used to settle obligations of these VIEs were $2.4 billion and $3.1 billion, respectively, and the liabilities for which creditors only have recourse to the VIEs were $909 million and $1.2 billion, respectively.

Calico

Calico is a life science company with a mission to harness advanced technologies to increase our understanding of the biology that controls lifespan.

In September 2014, AbbVie Inc. (AbbVie) and Calico entered into 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. In the second quarter of 2018, AbbVie and Calico amended the collaboration agreement resulting in an increase in total commitments. As of December 31, 2019, AbbVie has contributed $1,250 million to fund the collaboration pursuant to the agreement. As of December 31, 2019, Calico has contributed $500 million and has committed up to an additional $750 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 for projects covered under this agreement 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.

As of December 31, 2019, we have contributed $480 million to Calico in exchange for Calico convertible preferred units and are committed to fund up to an additional $750 million on an as-needed basis and subject to certain conditions.

Verily

Verily is a life science and healthcare company with a mission to make the world's health data useful so that people enjoy healthier lives. In December 2018, Verily received $900 million in cash from a $1.0 billion investment round. The remaining $100 million was received in the first quarter of 2019. As of December 31, 2019, Verily has received an aggregate amount of $1.8 billion from sales of equity securities to external investors. These transactions were accounted for as equity transactions and no gain or loss was recognized.

In the fourth quarter of 2019, Verily obtained a controlling financial interest in Onduo, an existing equity method investment. The transaction resulted in a $357 million gain from the revaluation of the previously held economic interest, which was recognized in other income (expense), net.

Unconsolidated VIEs

Certain of our non-marketable investments, including certain renewable energy investments accounted for under the equity method and certain other investments in private companies, are VIEs. The renewable energy entities' activities involve power generation using renewable sources. Private companies that we invest in are primarily early stage companies.

We have determined that the governance structures of these entities do not allow us to direct the activities that would significantly affect their economic performance. Therefore, we do not consolidate these VIEs in our consolidated financial statements.

The maximum exposure of these unconsolidated VIEs is generally based on the current carrying value of the investments and any future funding commitments. We have determined that the single source of our exposure to these VIEs is our capital investments in them. The carrying value and maximum exposure of these unconsolidated VIEs were not material as of December 31, 2018 and 2019.

Note 6. 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, 2018 and 2019.

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, 2018	As of December 31, 2019
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	(50)	(42)
Subtotal[(1)]	3,950	3,958
Total future finance lease payments	62	685
Less: imputed interest for finance leases	0	(89)
Total long-term debt	$ 4,012	$ 4,554

(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 and $4.1 billion as of December 31, 2018 and 2019, respectively. The fair value was determined based on observable market prices of identical instruments in less active markets and is categorized accordingly as Level 2 in the fair value hierarchy.

As of December 31, 2019, the aggregate future principal payments for long-term debt including long-term finance leases for each of the next five years and thereafter are as follows (in millions):

2020	$ 0
2021	1,046
2022	46
2023	46
2024	1,047
Thereafter	2,500
Total	$ 4,685

Credit Facility

As of December 31, 2019, we have $4.0 billion of revolving credit facilities which expire in July 2023. The interest rate for the credit facilities is determined based on a formula using certain market rates. No amounts were outstanding under the credit facilities as of December 31, 2018 and 2019.

Note 7. Supplemental Financial Statement Information

Property and Equipment, Net

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

	As of December 31, 2018	As of December 31, 2019
Land and buildings	$ 30,179	$ 39,865
Information technology assets	30,119	36,840
Construction in progress	16,838	21,036
Leasehold improvements	5,310	6,310
Furniture and fixtures	61	156
Property and equipment, gross	82,507	104,207
Less: accumulated depreciation	(22,788)	(30,561)
Property and equipment, net	$ 59,719	$ 73,646

As of December 31, 2018 and 2019, information technology assets and land and buildings under finance leases with a cost basis of $648 million and $1.6 billion, respectively, were included in property and equipment.

Accrued Expenses and Other Current Liabilities

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

	As of December 31, 2018	As of December 31, 2019
European Commission fines[(1)]	$ 7,754	$ 9,405
Accrued customer liabilities	1,810	2,245
Accrued purchases of property and equipment	1,603	2,411
Current operating lease liabilities	0	1,199
Other accrued expenses and current liabilities	5,791	7,807
Accrued expenses and other current liabilities	$ 16,958	$ 23,067

(1) Includes the effects of foreign exchange and interest. See Note 10 for further details.

Accumulated Other Comprehensive Income (Loss)

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

	Foreign Currency Translation Adjustments	Unrealized Gains (Losses) on Available-for-Sale Investments	Unrealized Gains (Losses) on Cash Flow Hedges	Total
Balance as of December 31, 2016	$ (2,646)	$ (179)	$ 423	$ (2,402)
Other comprehensive income (loss) before reclassifications	1,543	307	(638)	1,212
Amounts reclassified from AOCI	0	105	93	198
Other comprehensive income (loss)	1,543	412	(545)	1,410
Balance as of December 31, 2017	(1,103)	233	(122)	(992)
Cumulative effect of accounting change	0	(98)	0	(98)
Other comprehensive income (loss) before reclassifications	(781)	88	264	(429)
Amounts excluded from the assessment of hedge effectiveness recorded in AOCI	0	0	26	26
Amounts reclassified from AOCI	0	(911)	98	(813)
Other comprehensive income (loss)	(781)	(823)	388	(1,216)
Balance as of December 31, 2018	(1,884)	(688)	266	(2,306)
Cumulative effect of accounting change	0	0	(30)	(30)
Other comprehensive income (loss) before reclassifications	(119)	1,611	36	1,528
Amounts excluded from the assessment of hedge effectiveness recorded in AOCI	0	0	(14)	(14)
Amounts reclassified from AOCI	0	(111)	(299)	(410)
Other comprehensive income (loss)	(119)	1,500	(277)	1,104
Balance as of December 31, 2019	$ (2,003)	$ 812	$ (41)	$ (1,232)

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

		Gains (Losses) Reclassified from AOCI to the Consolidated Statements of Income		
		Year Ended December 31,		
AOCI Components	Location	2017	2018	2019
Unrealized gains (losses) on available-for-sale investments				
	Other income (expense), net	$ (105)	$ 1,190	$ 149
	Benefit (provision) for income taxes	0	(279)	(38)
	Net of tax	(105)	911	111
Unrealized gains (losses) on cash flow hedges				
Foreign exchange contracts	Revenue	(169)	(139)	367
Interest rate contracts	Other income (expense), net	5	6	6
	Benefit (provision) for income taxes	71	35	(74)
	Net of tax	(93)	(98)	299
Total amount reclassified, net of tax		$ (198)	$ 813	$ 410

Other Income (Expense), Net

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

	Year Ended December 31,		
	2017	2018	2019
Interest income	$ 1,312	$ 1,878	$ 2,427
Interest expense(1)	(109)	(114)	(100)
Foreign currency exchange gain (loss), net (2)	(121)	(80)	103
Gain (loss) on debt securities, net(3)	(110)	1,190	149
Gain (loss) on equity securities, net	73	5,460	2,649
Performance fees(4)	(32)	(1,203)	(326)
Gain (loss) and impairment from equity method investments, net	(156)	(120)	390
Other	158	378	102
Other income (expense), net	$ 1,015	$ 7,389	$ 5,394

(1) Interest expense is net of interest capitalized of $48 million, $92 million, and $167 million for the years ended December 31, 2017, 2018, and 2019, respectively.

(2) Our foreign currency exchange gain (loss), net, are related to the option premium costs and forwards points for our foreign currency hedging contracts, our foreign exchange transaction gains and losses from the conversion of the transaction currency to the functional currency, offset by the foreign currency hedging contract losses and gains. The net foreign currency transaction losses were $226 million, $195 million, and $166 million for the years ended December 31, 2017, 2018, and 2019, respectively.

(3) During the year ended December 31, 2018, the terms of a non-marketable debt security were modified resulting in an unrealized $1.3 billion gain.

(4) Performance fees were reclassified for prior periods from general and administrative expenses to other income (expense), net to conform with current period presentation.

Note 8. Acquisitions

2019 Acquisitions

Looker

In December 2019, we obtained all regulatory clearances necessary to close the acquisition of Looker, a unified platform for business intelligence, data applications and embedded analytics for $2.4 billion, with integration pending approval from a UK regulatory review. The addition of Looker to Google Cloud is expected to help customers accelerate how they analyze data, deliver business intelligence, and build data-driven applications.

The fair value of assets acquired and liabilities assumed was recorded based on a preliminary valuation and our estimates and assumptions are subject to change within the measurement period. The $2.4 billion purchase price includes our previously held equity interest and excludes post acquisition compensation arrangements. In aggregate, $91 million was cash acquired, $290 million was attributed to intangible assets, $1.9 billion to goodwill and $48 million to net assets acquired. Goodwill was recorded in the Google segment and primarily attributable to synergies expected to arise after the acquisition. Goodwill is not expected to be deductible for tax purposes.

Other Acquisitions

During the year ended December 31, 2019, we completed other acquisitions and purchases of intangible assets for total consideration of approximately $1.0 billion. In aggregate, $28 million was cash acquired, $282 million was attributed to intangible assets, $904 million to goodwill and $185 million 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.

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

For all intangible assets acquired and purchased during the year ended December 31, 2019, patents and developed technology have a weighted-average useful life of 3.5 years, customer relationships have a weighted-average useful life of 6.3 years, and trade names and other have a weighted-average useful life of 4.5 years.

Pending Acquisition of Fitbit

In November 2019, we entered into an agreement to acquire Fitbit, a leading wearables brand, for $7.35 per share, representing a total purchase price of approximately $2.1 billion as of the date of the agreement. The acquisition of Fitbit is expected to be completed in 2020, subject to customary closing conditions, including the receipt of regulatory approvals. Upon the close of the acquisition, Fitbit will be part of Google segment.

Note 9. Goodwill and Other Intangible Assets

Goodwill

Changes in the carrying amount of goodwill for the years ended December 31, 2018 and 2019 were as follows (in millions):

	Google	Other Bets	Total Consolidated
Balance as of December 31, 2017	$ 16,295	$ 452	$ 16,747
Acquisitions	1,227	0	1,227
Transfers	80	(80)	0
Foreign currency translation and other adjustments	(81)	(5)	(86)
Balance as of December 31, 2018	17,521	367	17,888
Acquisitions	2,353	475	2,828
Transfers	9	(9)	0
Foreign currency translation and other adjustments	38	(130)	(92)
Balance as of December 31, 2019	$ 19,921	$ 703	$ 20,624

Other Intangible Assets

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

	As of December 31, 2018		
	Gross Carrying Amount	Accumulated Amortization	Net Carrying Amount
Patents and developed technology	$ 5,125	$ 3,394	$ 1,731
Customer relationships	349	308	41
Trade names and other	703	255	448
Total	$ 6,177	$ 3,957	$ 2,220

	As of December 31, 2019		
	Gross Carrying Amount	Accumulated Amortization	Net Carrying Value
Patents and developed technology	$ 4,972	$ 3,570	$ 1,402
Customer relationships	254	30	224
Trade names and other	703	350	353
Total	$ 5,929	$ 3,950	$ 1,979

Patents and developed technology, customer relationships, and trade names and other have weighted-average remaining useful lives of 2.3 years, 5.6 years, and 3.0 years, respectively.

Amortization expense relating to purchased intangible assets was $796 million, $865 million, and $795 million for the years ended December 31, 2017, 2018, and 2019, respectively.

As of December 31, 2019, expected amortization expense relating to purchased intangible assets for each of the next five years and thereafter is as follows (in millions):

2020	$ 749
2021	665
2022	317
2023	57
2024	45
Thereafter	146
	$ 1,979

Note 10. Commitments and Contingencies

Purchase Obligations

As of December 31, 2019, we had $5.7 billion of other non-cancelable contractual obligations, primarily related to data center operations and build-outs, digital media content licensing, and purchases of inventory.

Indemnifications

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

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

As of December 31, 2019, we did not have any material indemnification claims that were probable or reasonably possible.

Legal Matters

Antitrust Investigations

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

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

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

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

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

From time to time we are subject to formal and informal inquiries and investigations by competition authorities in the United States, Europe, and other jurisdictions. For example, in August 2019, we began receiving civil investigative demands from the U.S. Department of Justice requesting information and documents relating to our prior antitrust investigations and certain of our business practices. Attorneys general from 51 U.S. states and territories have also opened antitrust investigations into certain of our business practices. We continue to cooperate with federal and state regulators in the United States, and other regulators around the world.

Patent and Intellectual Property Claims

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

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

In 2010, Oracle America, Inc. (Oracle) brought a copyright lawsuit against Google in the Northern District of California, alleging that Google's Android operating system infringes Oracle's copyrights related to certain Java application programming interfaces. After trial, final judgment was entered by the district court in favor of Google on June 8, 2016, and the court decided post-trial motions in favor of Google. Oracle appealed and on March 27, 2018, the appeals court reversed and remanded the case for a trial on damages. On May 29, 2018, we filed a petition for a rehearing at the Federal Circuit, and on August 28, 2018, the Federal Circuit denied the petition. On January 24, 2019, we filed a petition to the Supreme Court of the United States to review this case. On April 29, 2019, the Supreme Court requested the views of the Solicitor General regarding our petition. On September 27, 2019, the Solicitor General recommended denying our petition, and we provided our response on October 16, 2019. On November 15, 2019, the Supreme Court granted our petition and made a decision to review the case. If the Supreme Court does not rule in our favor, the case will be remanded to the district court for further determination of the remaining issues in the case, including damages, if any. 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, intellectual property, privacy, tax and related compliance, labor and employment, commercial disputes, content generated by our users, goods and services offered by advertisers or publishers using our platforms, personal injury, consumer protection, and other matters. Such claims, suits, regulatory and government investigations, and other proceedings could result in fines, civil or criminal penalties, or other adverse consequences.

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

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

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

Non-Income Taxes

We are under audit by various domestic and foreign tax authorities with regards to non-income tax matters. The subject matter of non-income tax audits primarily arises from disputes on the tax treatment and tax rate applied to the sale of our products and services in these jurisdictions and the tax treatment of certain employee benefits. We accrue non-income taxes that may result from examinations by, or any negotiated agreements with, these tax authorities when a loss is probable and reasonably estimable. If we determine that a loss is reasonably possible and the loss or range of loss can be estimated, we disclose the reasonably possible loss. 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 11. Stockholders' Equity

Convertible Preferred Stock

Our board of directors has authorized 100 million shares of convertible preferred stock, $0.001 par value, issuable in series. As of December 31, 2018 and 2019, no shares were issued or outstanding.

Class A and Class B Common Stock and Class C Capital Stock

Our board of directors has authorized three classes of stock, Class A and Class B common stock, and Class C capital stock. The rights of the holders of each class of our common and capital stock are identical, except with respect to voting. Each share of Class A common stock is entitled to one vote per share. Each share of Class B common stock is entitled to 10 votes per share. Class C capital stock has no voting rights, except as required by applicable law. Shares of Class B common stock may be converted at any time at the option of the stockholder and automatically convert upon sale or transfer to Class A common stock.

Share Repurchases

In January 2018, the board of directors of Alphabet authorized the company to repurchase up to $8.6 billion of its Class C capital stock. In January and July 2019, the board of directors of Alphabet authorized the company to repurchase up to an additional $12.5 billion and $25.0 billion of its Class C capital stock, respectively. Share repurchases pursuant to the January 2018 and January 2019 authorizations were completed in 2019. The repurchases are being executed from time to time, subject to general business and market conditions and other investment opportunities, through open market purchases or privately negotiated transactions, including through Rule 10b5-1 plans. The repurchase program does not have an expiration date.

During the years ended December 31, 2018 and 2019, we repurchased and subsequently retired 8.2 million shares of Alphabet Class C capital stock for an aggregate amount of $9.1 billion and 15.3 million shares of Alphabet Class C capital stock for an aggregate amount of $18.4 billion, respectively.

Note 12. Net Income Per Share

We compute net income per share of Class A and Class B common stock and Class C capital stock using the two-class method. Basic net income per share is computed using the weighted-average number of shares outstanding during the period. Diluted net income per share is computed using the weighted-average number of shares and the effect of potentially dilutive securities outstanding during the period. Potentially dilutive securities consist of restricted stock units and other contingently issuable shares. The dilutive effect of outstanding restricted stock units and other contingently issuable shares is reflected in diluted earnings per share by application of the treasury stock method. The computation of the diluted net income per share of Class A common stock assumes the conversion of Class B common stock, while the diluted net income per share of Class B common stock does not assume the conversion of those shares.

The rights, including the liquidation and dividend rights, of the holders of our Class A and Class B common stock and Class C capital stock are identical, except with respect to voting. Furthermore, there are a number of safeguards built into our certificate of incorporation, as well as Delaware law, which preclude our board of directors from declaring or paying unequal per share dividends on our Class A and Class B common stock and Class C capital stock. Specifically, Delaware law provides that amendments to our certificate of incorporation which would have the effect of adversely altering the rights, powers, or preferences of a given class of stock must be approved by the class of stock adversely affected by the proposed amendment. In addition, our certificate of incorporation provides that before any such amendment may be put to a stockholder vote, it must be approved by the unanimous consent of our board of directors. As a result, the undistributed earnings for each year are allocated based on the contractual participation rights of the Class A and Class B common shares and Class C capital stock as if the earnings for the year had been distributed. As the liquidation and dividend rights are identical, the undistributed earnings are allocated on a proportionate basis.

In the years ended December 31, 2017, 2018 and 2019, 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.

The following tables set 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):

	Year Ended December 31,		
	2017		
	Class A	Class B	Class C
Basic net income per share:			
Numerator			
Allocation of undistributed earnings	$ 5,438	$ 862	$ 6,362
Denominator			
Number of shares used in per share computation	297,604	47,146	348,151
Basic net income per share	$ 18.27	$ 18.27	$ 18.27
Diluted net income per share:			
Numerator			
Allocation of undistributed earnings for basic computation	$ 5,438	$ 862	$ 6,362
Reallocation of undistributed earnings as a result of conversion of Class B to Class A shares	862	0	0
Reallocation of undistributed earnings	(74)	(14)	74
Allocation of undistributed earnings	$ 6,226	$ 848	$ 6,436
Denominator			
Number of shares used in basic computation	297,604	47,146	348,151
Weighted-average effect of dilutive securities			
Add:			
Conversion of Class B to Class A common shares outstanding	47,146	0	0
Restricted stock units and other contingently issuable shares	1,192	0	9,491
Number of shares used in per share computation	345,942	47,146	357,642
Diluted net income per share	$ 18.00	$ 18.00	$ 18.00

	Year Ended December 31,		
	2018		
	Class A	Class B	Class C
Basic net income per share:			
Numerator			
Allocation of undistributed earnings	$ 13,200	$ 2,072	$ 15,464
Denominator			
Number of shares used in per share computation	298,548	46,864	349,728
Basic net income per share	$ 44.22	$ 44.22	$ 44.22
Diluted net income per share:			
Numerator			
Allocation of undistributed earnings for basic computation	$ 13,200	$ 2,072	$ 15,464
Reallocation of undistributed earnings as a result of conversion of Class B to Class A shares	2,072	0	0
Reallocation of undistributed earnings	(146)	(24)	146
Allocation of undistributed earnings	$ 15,126	$ 2,048	$ 15,610
Denominator			
Number of shares used in basic computation	298,548	46,864	349,728
Weighted-average effect of dilutive securities			
Add:			
Conversion of Class B to Class A common shares outstanding	46,864	0	0
Restricted stock units and other contingently issuable shares	689	0	7,456
Number of shares used in per share computation	346,101	46,864	357,184
Diluted net income per share	$ 43.70	$ 43.70	$ 43.70

	Year Ended December 31,		
	2019		
	Class A	Class B	Class C
Basic net income per share:			
Numerator			
Allocation of undistributed earnings	$ 14,846	$ 2,307	$ 17,190
Denominator			
Number of shares used in per share computation	299,402	46,527	346,667
Basic net income per share	$ 49.59	$ 49.59	$ 49.59
Diluted net income per share:			
Numerator			
Allocation of undistributed earnings for basic computation	$ 14,846	$ 2,307	$ 17,190
Reallocation of undistributed earnings as a result of conversion of Class B to Class A shares	2,307	0	0
Reallocation of undistributed earnings	(126)	(20)	126
Allocation of undistributed earnings	$ 17,027	$ 2,287	$ 17,316
Denominator			
Number of shares used in basic computation	299,402	46,527	346,667
Weighted-average effect of dilutive securities			
Add:			
Conversion of Class B to Class A common shares outstanding	46,527	0	0
Restricted stock units and other contingently issuable shares	413	0	5,547
Number of shares used in per share computation	346,342	46,527	352,214
Diluted net income per share	$ 49.16	$ 49.16	$ 49.16

Note 13. Compensation Plans

Stock Plans

Under our 2012 Stock Plan, RSUs or stock options may be granted. An RSU award is an agreement to issue shares of our publicly traded stock at the time the award vests. Incentive and non-qualified stock options, or rights to purchase common stock, are generally granted for a term of 10 years. RSUs granted to participants under the 2012 Stock Plan generally vest over four years contingent upon employment or service with us on the vesting date.

As of December 31, 2019, there were 37,982,435 shares of stock reserved for future issuance under our Stock Plan.

Additionally, we have stock-based awards that may be settled in the stock of certain of our Other Bets.

Stock-Based Compensation

For the years ended December 31, 2017, 2018 and 2019, total stock-based compensation expense was $7.9 billion, $10.0 billion and $11.7 billion, including amounts associated with awards we expect to settle in Alphabet stock of $7.7 billion, $9.4 billion, and $10.8 billion, respectively.

For the years ended December 31, 2017, 2018 and 2019, we recognized tax benefits on total stock-based compensation expense, which are reflected in the provision for income taxes in the Consolidated Statements of Income, of $1.6 billion, $1.5 billion, and $1.8 billion, respectively.

For the years ended December 31, 2017, 2018 and 2019, tax benefit realized related to awards vested or exercised during the period was $2.7 billion, $2.1 billion and $2.2 billion, respectively. These amounts do not include the indirect effects of stock-based awards, which primarily relate to the research and development tax credit.

Stock-Based Award Activities

The following table summarizes the activities for our unvested RSUs in Alphabet stock for the year ended December 31, 2019:

	Unvested Restricted Stock Units	
	Number of Shares	Weighted-Average Grant-Date Fair Value
Unvested as of December 31, 2018	18,467,678	$ 936.96
Granted	13,934,041	$ 1,092.36
Vested	(11,576,766)	$ 919.28
Forfeited/canceled	(1,430,717)	$ 990.56
Unvested as of December 31, 2019	19,394,236	$ 1,055.22

The weighted-average grant-date fair value of RSUs granted during the years ended December 31, 2017 and 2018, was $845.06 and $1,095.89, respectively. Total fair value of RSUs, as of their respective vesting dates, during the years ended December 31, 2017, 2018, and 2019 were $11.3 billion, $14.1 billion, and $15.2 billion, respectively.

As of December 31, 2019, there was $19.1 billion of unrecognized compensation cost related to unvested employee RSUs. This amount is expected to be recognized over a weighted-average period of 2.6 years.

401(k) Plans

We have two 401(k) Savings Plans that qualify as deferred salary arrangements under Section 401(k) of the Internal Revenue Code. Under these 401(k) Plans, matching contributions are based upon the amount of the employees' contributions subject to certain limitations. We recognized expense of approximately $448 million, $691 million, and $724 million for the years ended December 31, 2017, 2018, and 2019, respectively.

Note 14. Income Taxes

Income from continuing operations before income taxes consists of the following (in millions):

	Year Ended December 31,		
	2017	2018	2019
Domestic operations	$ 10,680	$ 15,779	$ 16,426
Foreign operations	16,513	19,134	23,199
Total	$ 27,193	$ 34,913	$ 39,625

The provision for income taxes consists of the following (in millions):

	Year Ended December 31,		
	2017	2018	2019
Current:			
Federal and state	$ 12,608	$ 2,153	$ 2,424
Foreign	1,746	1,251	2,713
Total	14,354	3,404	5,137
Deferred:			
Federal and state	220	907	286
Foreign	(43)	(134)	(141)
Total	177	773	145
Provision for income taxes	$ 14,531	$ 4,177	$ 5,282

The Tax Act enacted on December 22, 2017 introduced significant changes to U.S. income tax law. Effective 2018, the Tax Act reduced the U.S. statutory tax rate from 35% to 21% and created new taxes on certain foreign-sourced earnings and certain related-party payments.

Due to the timing of the enactment and the complexity involved in applying the provisions of the Tax Act, we made reasonable estimates of the effects and recorded provisional amounts in our consolidated financial statements as of December 31, 2017. As we collected and prepared necessary data, and interpreted the additional guidance issued by the U.S. Treasury Department, the IRS, and other standard-setting bodies, we made adjustments, over the course of 2018, to the provisional amounts including refinements to deferred taxes. The accounting for the tax effects of the Tax Act was completed as of December 31, 2018.

Transition tax

The Tax Act required us to pay U.S. income taxes on accumulated foreign subsidiary earnings not previously subject to U.S. income tax at a rate of 15.5% to the extent of foreign cash and certain other net current assets and 8% on the remaining earnings. We recorded a provisional amount for our transitional tax liability and income tax expense of $10.2 billion as of December 31, 2017. Subsequent adjustments in 2018 and 2019 were not material.

Deferred tax effects

Due to the change in the statutory tax rate from the Tax Act, we remeasured our deferred taxes as of December 31, 2017 to reflect the reduced rate that will apply in future periods when these deferred taxes are settled or realized. We recognized a deferred tax benefit of $376 million to reflect the reduced U.S. tax rate and other effects of the Tax Act as of December 31, 2017.

The reconciliation of federal statutory income tax rate to our effective income tax rate is as follows:

	Year Ended December 31,		
	2017	2018	2019
U.S. federal statutory tax rate	35.0%	21.0%	21.0%
Foreign income taxed at different rates	(14.2)	(4.9)	(5.6)
Effect of the Tax Act			
Transition tax	37.6	(0.1)	(0.6)
Deferred tax effects	(1.4)	(1.2)	0.0
Federal research credit	(1.8)	(2.4)	(2.5)
Stock-based compensation expense	(4.5)	(2.2)	(0.7)
European Commission fines	3.5	3.1	1.0
Deferred tax asset valuation allowance	0.9	(2.0)	0.0
State and local income taxes	0.1	(0.4)	1.1
Other adjustments	(1.8)	1.1	(0.4)
Effective tax rate	53.4%	12.0%	13.3%

Our effective tax rate for each of the years presented was affected by earnings realized in foreign jurisdictions with statutory tax rates lower than the federal statutory tax rate. Substantially all of the income from foreign operations was earned by an Irish subsidiary. Beginning in 2018, earnings realized in foreign jurisdictions are subject to U.S. tax in accordance with the Tax Act.

On July 27, 2015, the United States Tax Court, in an opinion in Altera Corp. v. Commissioner, invalidated the portion of the Treasury regulations issued under IRC Section 482 requiring related-party participants in a cost sharing arrangement to share stock-based compensation costs. The U.S. Tax Court issued the final decision on December 28, 2015. As a result of that decision, we recorded a tax benefit related to the anticipated reimbursement of cost share payment for previously shared stock-based compensation costs.

On June 7, 2019, the United States Court of Appeals for the Ninth Circuit overturned the 2015 Tax Court decision in Altera Corp. v. Commissioner, and upheld the portion of the Treasury regulations issued under IRC Section 482 requiring related-party participants in a cost sharing arrangement to share stock-based compensation costs. As a result of the Ninth Circuit court decision, our cumulative net tax benefit of $418 million related to previously shared stock-based compensation costs was reversed in the year ended December 31, 2019.

Deferred Income Taxes

Deferred income taxes reflect the net effects of temporary differences between the carrying amounts of assets and liabilities for financial reporting purposes and the amounts used for income tax purposes. Significant components of our deferred tax assets and liabilities are as follows (in millions):

	As of December 31,	
	2018	2019
Deferred tax assets:		
Stock-based compensation expense	$ 291	$ 421
Accrued employee benefits	387	463
Accruals and reserves not currently deductible	902	1,047
Tax credits	1,979	3,264
Basis difference in investment in Arris	657	0
Prepaid cost sharing	597	0
Net operating losses	557	771
Operating leases	160	1,876
Other	21	390
Total deferred tax assets	5,551	8,232
Valuation allowance	(2,817)	(3,502)
Total deferred tax assets net of valuation allowance	2,734	4,730
Deferred tax liabilities:		
Property and equipment, net	(1,382)	(1,798)
Renewable energy investments	(500)	(466)
Foreign Earnings	(111)	(373)
Net investment gains	(1,143)	(1,074)
Operating leases	0	(1,619)
Other	(125)	(380)
Total deferred tax liabilities	(3,261)	(5,710)
Net deferred tax assets (liabilities)	$ (527)	$ (980)

As of December 31, 2019, our federal, state and foreign net operating loss carryforwards for income tax purposes were approximately $1.8 billion, $3.1 billion, and $1.9 billion respectively. If not utilized, the federal and foreign net operating loss carryforwards will begin to expire in 2021 and the state net operating loss carryforwards will begin to expire in 2020. It is more likely than not that certain net operating loss carryforwards will not be realized; therefore, we have recorded a valuation allowance against them. The net operating loss carryforwards are subject to various annual limitations under the tax laws of the different jurisdictions.

As of December 31, 2019, our California research and development credit carryforwards for income tax purposes were approximately $3.0 billion that can be carried over indefinitely. We believe the state tax credit is not likely to be realized.

As of December 31, 2019, we maintained a valuation allowance with respect to California deferred tax assets, certain federal net operating losses, certain state tax credits and certain foreign net operating losses that we believe are not likely to be realized. Due to gains from equity securities recognized, we released the valuation allowance in 2018 against the deferred tax asset for the book-to-tax basis difference in our investments in Arris shares received from the sale of the Motorola Home business to Arris in 2013. We continue to reassess the remaining valuation allowance quarterly and if future evidence allows for a partial or full release of the valuation allowance, a tax benefit will be recorded accordingly.

Uncertain Tax Positions

The following table summarizes the activity related to our gross unrecognized tax benefits (in millions):

	Year Ended December 31,		
	2017	2018	2019
Beginning gross unrecognized tax benefits	$ 5,393	$ 4,696	$ 4,652
Increases related to prior year tax positions	685	321	938
Decreases related to prior year tax positions	(257)	(623)	(143)
Decreases related to settlement with tax authorities	(1,875)	(191)	(2,886)
Increases related to current year tax positions	750	449	816
Ending gross unrecognized tax benefits	$ 4,696	$ 4,652	$ 3,377

The total amount of gross unrecognized tax benefits was $4.7 billion, $4.7 billion, and $3.4 billion as of December 31, 2017, 2018, and 2019, respectively, of which, $3.0 billion, $2.9 billion, and $2.3 billion, if recognized, would affect our effective tax rate, respectively. The decrease in gross unrecognized tax benefits in 2017 and 2019 was primarily as a result of the resolution of multi-year audits.

As of December 31, 2018 and 2019, we had accrued $490 million and $130 million in interest and penalties in provision for income taxes, respectively.

We file income tax returns in the U.S. federal jurisdiction and in many state and foreign jurisdictions, our two major tax jurisdictions are the U.S. federal and Ireland. We are subject to the continuous examination of our income tax returns by the IRS and other tax authorities. The IRS completed its examination through our 2015 tax years; all issues have been concluded and the IRS will commence its examination of our 2016 through 2018 tax returns. We have also received tax assessments in multiple foreign jurisdictions asserting transfer pricing adjustments or permanent establishment. We continue to defend any and all such claims as presented.

The tax years 2011 through 2018 remain subject to examination by the appropriate governmental agencies for Irish tax purposes. There are other ongoing audits in various other jurisdictions that are not material to our financial statements.

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 effect, 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 our provision for income taxes in the period such resolution occurs. Although the timing of resolution, settlement, and closure of audits is not certain, we do not believe it is reasonably possible that our unrecognized tax benefits will materially change in the next 12 months.

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 as Other Bets.

Our reported segments are:

- Google – Google includes our main products such as ads, Android, Chrome, hardware, Google Cloud, Google Maps, Google Play, Search, and YouTube. Our technical infrastructure is also included in Google. Google generates revenues primarily from advertising; sales of apps, in-app purchases, digital content products, and hardware; and licensing and service fees, including fees received for Google Cloud offerings and subscription-based products.
- Other Bets – Other Bets is a combination of multiple operating segments that are not individually material. Other Bets includes Access, Calico, CapitalG, GV, Verily, Waymo, and X, among others. Revenues from the Other Bets are derived primarily through the sales of internet and TV services through Access as well as 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.

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

	Year Ended December 31,		
	2017	2018	2019
Revenues:			
Google	$ 110,547	$ 136,362	$ 160,743
Other Bets	477	595	659
Hedging gains (losses)	(169)	(138)	455
Total revenues	$ 110,855	$ 136,819	$ 161,857

	Year Ended December 31,		
	2017	2018	2019
Operating income (loss):			
Google	$ 32,456	$ 36,655	$ 41,673
Other Bets	(2,734)	(3,358)	(4,824)
Reconciling items[(1)]	(3,544)	(5,773)	(2,618)
Total income from operations	$ 26,178	$ 27,524	$ 34,231

(1) Reconciling items are generally comprised of corporate administrative costs, hedging gains (losses) and other miscellaneous items that are not allocated to individual segments. Reconciling items include the European Commission fines for the years ended December 31, 2017, 2018 and 2019, and a charge from a legal settlement for the year ended December 31, 2019. Performance fees previously included in reconciling items were reclassified for the years ended December 31, 2017 and 2018 from general and administrative expenses to other income (expense), net to conform with current period presentation. For further information on the reclassification, see Note 1.

	Year Ended December 31,		
	2017	2018	2019
Capital expenditures:			
Google	$ 12,619	$ 25,460	$ 25,251
Other Bets	493	181	281
Reconciling items[(2)]	72	(502)	(1,984)
Total capital expenditures as presented on the Consolidated Statements of Cash Flows	$ 13,184	$ 25,139	$ 23,548

(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):

	Year Ended December 31,		
	2017	2018	2019
Stock-based compensation:			
Google	$ 7,168	$ 8,755	$ 10,185
Other Bets	363	489	474
Reconciling items[3]	148	109	135
Total stock-based compensation[4]	$ 7,679	$ 9,353	$ 10,794
Depreciation, amortization, and impairment:			
Google	$ 6,608	$ 8,708	$ 11,158
Other Bets	307	327	566
Reconciling items[3]	0	0	57
Total depreciation, amortization, and impairment	$ 6,915	$ 9,035	$ 11,781

(3) Reconciling items relate to corporate administrative and other 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.

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

	As of December 31, 2018	As of December 31, 2019
Long-lived assets:		
United States	$ 74,882	$ 94,907
International	22,234	28,424
Total long-lived assets	$ 97,116	$ 123,331

For revenues by geography, see Note 2.

ITEM 9. CHANGES IN AND DISAGREEMENTS WITH ACCOUNTANTS ON ACCOUNTING AND FINANCIAL DISCLOSURE

None.

ITEM 9A. 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 Annual Report on Form 10-K.

Based on this evaluation, our chief executive officer and chief financial officer concluded that, as of December 31, 2019, our disclosure controls and procedures are designed at a reasonable assurance level and are effective to provide reasonable assurance that information we are required to disclose in reports that we file or submit under the Exchange Act is recorded, processed, summarized, and reported within the time periods specified in the SEC's rules and forms, and that such information is accumulated and communicated to our management, including our chief executive officer and chief financial officer, as appropriate, to allow timely decisions regarding required disclosure.

Changes in Internal Control over Financial Reporting

We rely extensively on information systems to manage our business and summarize and report operating results. In 2019, we began a multi-year implementation of a new global enterprise resource planning ("ERP") system, which will replace much of our existing core financial systems. The ERP system is designed to accurately maintain the Company's financial records, enhance the flow of financial information, improve data management and provide timely information to the Company's management team. The implementation is expected to occur in phases over the next several years, with initial changes to our general ledger and consolidated financial reporting to take place in 2020. There have been no changes in our internal control over financial reporting during the quarter ended December 31, 2019 that have materially affected, or are reasonably likely to materially affect, our internal control over financial reporting. However, as the phased implementation of the new ERP system continues, we will change our processes and procedures which, in turn, could result in changes to our internal control over financial reporting. As such changes occur, we will evaluate quarterly whether such changes materially affect our internal control over financial reporting.

Management's Report on Internal Control over Financial Reporting

Our management is responsible for establishing and maintaining adequate internal control over financial reporting, as defined in Rule 13a-15(f) of the Exchange Act. Our management conducted an evaluation of the effectiveness of our internal control over financial reporting based on the framework in *Internal Control—Integrated Framework* issued by the Committee of Sponsoring Organizations of the Treadway Commission (2013 framework). Based on this evaluation, management concluded that our internal control over financial reporting was effective as of December 31, 2019. Management reviewed the results of its assessment with our Audit Committee. The effectiveness of our internal control over financial reporting as of December 31, 2019 has been audited by Ernst & Young LLP, an independent registered public accounting firm, as stated in its report which is included in Item 8 of this Annual Report on Form 10-K.

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.

ITEM 9B. OTHER INFORMATION

None.

PART III

ITEM 10. DIRECTORS, EXECUTIVE OFFICERS AND CORPORATE GOVERNANCE

The information required by this item will be included under the caption “Directors, Executive Officers, and Corporate Governance” in our Proxy Statement for 2020 Annual Meeting of Stockholders to be filed with the SEC within 120 days of the fiscal year ended December 31, 2019 (2020 Proxy Statement) and is incorporated herein by reference.

ITEM 11. EXECUTIVE COMPENSATION

The information required by this item will be included under the captions “Director Compensation,” “Executive Compensation” and “Directors, Executive Officers, and Corporate Governance—Corporate Governance and Board Matters—Compensation Committee Interlocks and Insider Participation” in the 2020 Proxy Statement and is incorporated herein by reference.

ITEM 12. SECURITY OWNERSHIP OF CERTAIN BENEFICIAL OWNERS AND MANAGEMENT AND RELATED STOCKHOLDER MATTERS

The information required by this item will be included under the captions “Common Stock Ownership of Certain Beneficial Owners and Management” and “Equity Compensation Plan Information” in the 2020 Proxy Statement and is incorporated herein by reference.

ITEM 13. CERTAIN RELATIONSHIPS AND RELATED TRANSACTIONS, AND DIRECTOR INDEPENDENCE

The information required by this item will be included under the captions “Certain Relationships and Related Transactions” and “Directors, Executive Officers, and Corporate Governance—Corporate Governance and Board Matters—Director Independence” in the 2020 Proxy Statement and is incorporated herein by reference.

ITEM 14. PRINCIPAL ACCOUNTANT FEES AND SERVICES

The information required by this item will be included under the caption “Independent Registered Public Accounting Firm” in the 2020 Proxy Statement and is incorporated herein by reference.

PART IV

ITEM 15. EXHIBITS, FINANCIAL STATEMENT SCHEDULES

We have filed the following documents as part of this Annual Report on Form 10-K:

1. Consolidated Financial Statements

2. Financial Statement Schedules

Schedule II: Valuation and Qualifying Accounts

The table below details the activity of the allowance for doubtful accounts and sales credits for the years ended December 31, 2017, 2018 and 2019 (in millions):

	Balance at Beginning of Year	Additions	Usage	Balance at End of Year
Year ended December 31, 2017	$ 467	$ 1,131	$ (924)	$ 674
Year ended December 31, 2018	$ 674	$ 1,115	$ (1,060)	$ 729
Year ended December 31, 2019	$ 729	$ 1,481	$ (1,457)	$ 753

Note: Additions to the allowance for doubtful accounts are charged to expense. Additions to the allowance for sales credits are charged against revenues.

All other schedules have been omitted because they are not required, not applicable, or the required information is otherwise included.

3. Exhibits

Exhibit Number	Description	Incorporated by reference herein: Form	Incorporated by reference herein: Date
2.01	Agreement and Plan of Merger, dated October 2, 2015, by and among Google Inc., the Registrant and Maple Technologies Inc.	Current Report on Form 8-K (File No. 001-37580)	October 2, 2015
3.01	Amended and Restated Certificate of Incorporation of the Registrant, dated October 2, 2015	Current Report on Form 8-K (File No. 001-37580)	October 2, 2015
3.02	Amended and Restated Bylaws of the Registrant, dated October 2, 2015	Current Report on Form 8-K (File No. 001-37580)	October 2, 2015
4.01	Specimen Class A Common Stock certificate	Current Report on Form 8-K (File No. 001-37580)	October 2, 2015
4.02	Specimen Class C Capital Stock certificate	Current Report on Form 8-K (File No. 001-37580)	October 2, 2015
4.03	Alphabet Inc. Deferred Compensation Plan	Current Report on Form 8-K (File No. 001-37580)	October 2, 2015
4.04	Transfer Restriction Agreement, dated October 2, 2015, between the Registrant and Larry Page and certain of his affiliates	Current Report on Form 8-K (File No. 001-37580)	October 2, 2015

Exhibit Number		Description	Incorporated by reference herein	
			Form	Date
4.05		Transfer Restriction Agreement, dated October 2, 2015, between the Registrant and Sergey Brin and certain of his affiliates	Current Report on Form 8-K (File No. 001-37580)	October 2, 2015
4.06		Transfer Restriction Agreement, dated October 2, 2015, between the Registrant and Eric E. Schmidt and certain of its affiliates	Current Report on Form 8-K (File No. 001-37580)	October 2, 2015
4.07		Class C Undertaking, dated October 2, 2015, executed by the Registrant	Current Report on Form 8-K (File No. 001-37580)	October 2, 2015
4.08		Indenture, dated February 12, 2016, between the Registrant and The Bank of New York Mellon Trust Company, N.A., as Trustee	Registration Statement on Form S-3 (File No. 333-209510)	February 12, 2016
4.09		Registrant Registration Rights Agreement dated December 14, 2015	Registration Statement on Form S-3 (File No. 333-209518)	February 12, 2016
4.10		First Supplemental Indenture, dated April 27, 2016, between the Registrant and The Bank of New York Mellon Trust Company, N.A., as trustee	Current Report on Form 8-K (File No. 001-37580)	April 27, 2016
4.11		Form of the Registrant's 3.625% Notes due 2021 (included in Exhibit 4.10)		
4.12		Form of the Registrant's 3.375% Notes due 2024 (included in Exhibit 4.10)		
4.13		Form of the Registrant's 1.998% Note due 2026	Current Report on Form 8-K (File No. 001-37580)	August 9, 2016
4.14	*	Description of Registrant's Securities		
10.01	◆	Form of Indemnification Agreement entered into between the Registrant, its affiliates and its directors and officers	Current Report on Form 8-K (File No. 001-37580)	October 2, 2015
10.02	◆	Letter Agreement, dated April 24, 2019, between Robin L. Washington and Alphabet Inc.	Current Report on Form 8-K (File No. 001-37580)	April 30, 2019
10.03	◆	Letter Agreement, dated December 7, 2019, between Frances H. Arnold and Alphabet Inc.	Current Report on Form 8-K (File No. 001-37580)	December 9, 2019
10.04	◆	Compensation Plan Agreement, dated October 2, 2015, between Google Inc. and the Registrant	Current Report on Form 8-K (File No. 001-37580)	October 2, 2015
10.05	◆	Director Arrangements Agreement, dated October 2, 2015, between Google Inc. and the Registrant	Current Report on Form 8-K (File No. 001-37580)	October 2, 2015
10.06	◆	Alphabet Inc. Deferred Compensation Plan	Current Report on Form 8-K (File No. 001-37580)	October 2, 2015
10.07	◆	Google Inc. 2004 Stock Plan, as amended	Current Report on Form 8-K (File No. 000-50726)	June 7, 2011
10.07.1	◆	Google Inc. 2004 Stock Plan - Form of Google Stock Option Agreement	Annual Report on Form 10-K (File No. 000-50726)	March 30, 2005
10.07.2	◆	Google Inc. 2004 Stock Plan - Form of Google Restricted Stock Unit Agreement	Annual Report on Form 10-K (File No. 000-50726)	March 30, 2005
10.07.3	◆	Google Inc. 2004 Stock Plan - Amendment to Stock Option Agreements	Registration Statement on Form S-3 (File No. 333-142243)	April 20, 2007
10.08	◆	Alphabet Inc. Amended and Restated 2012 Stock Plan	Current Report on Form 8-K (File No. 001-37580)	June 21, 2019

Exhibit Number		Description	Incorporated by reference herein Form	Date
10.08.1	* ◆	Alphabet Inc. Amended and Restated 2012 Stock Plan - Form of Alphabet Restricted Stock Unit Agreement		
10.08.2	* ◆	Alphabet Inc. Amended and Restated 2012 Stock Plan - Performance Stock Unit Agreement		
10.09	◆	Motorola Mobility Holdings, Inc. 2011 Incentive Compensation Plan	Registration Statement on Form S-8 (File No. 333-181661)	May 24, 2012
10.10	◆	Apigee Corporation 2015 Equity Incentive Plan	Registration Statement on Form S-8 (File No. 333-214573)	November 10, 2016
10.10.1	◆	Apigee Corporation 2015 Equity Incentive Plan - Form of Restricted Stock Unit Agreement	Registration Statement on Form S-8 (File No. 333-214573)	November 10, 2016
14.01		Code of Conduct of the Registrant as amended on September 21, 2017	Annual Report on Form 10-K (File No. 001-37580)	February 6, 2018
21.01	*	Subsidiaries of the Registrant		
23.01	*	Consent of Ernst & Young LLP, Independent Registered Public Accounting Firm		
24.01	*	Power of Attorney (incorporated by reference to the signature page of this Annual Report on Form 10-K)		
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		
99.01		EC AdSense for Search Decision	Current Report on Form 8-K (File No. 001-37580)	March 20, 2019
99.02		Press Release regarding Alphabet Management Change	Current Report on Form 8-K (File No. 001-37580)	December 4, 2019
101.INS	*	Inline XBRL Instance Document - the instance document does not appear in the Interactive Data File because its XBRL tags are embedded within the Inline XBRL document.		
101.SCH	*	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		

Exhibit Number		Description	Incorporated by reference herein	
			Form	Date
101.PRE	*	XBRL Taxonomy Extension Presentation Linkbase Document		
104		Cover Page Interactive Data File (formatted as Inline XBRL and contained in Exhibit 101)		

◆ Indicates management compensatory plan, contract, or arrangement.

* Filed herewith.

‡ Furnished herewith.

ITEM 16. FORM 10-K SUMMARY

None.

SIGNATURES

Pursuant to the requirements of Section 13 or 15(d) of the Securities Exchange Act of 1934, the Registrant has duly caused this Annual Report on Form 10-K to be signed on its behalf by the undersigned, thereunto duly authorized.

Date: February 3, 2020

ALPHABET INC.

By: /S/ SUNDAR PICHAI

Sundar Pichai

Chief Executive Officer
(Principal Executive Officer of the Registrant)

POWER OF ATTORNEY

KNOW ALL PERSONS BY THESE PRESENTS, that each person whose signature appears below constitutes and appoints Sundar Pichai and Ruth M. Porat, jointly and severally, his or her attorney-in-fact, with the power of substitution, for him or her in any and all capacities, to sign any amendments to this Annual Report on Form 10-K and to file the same, with exhibits thereto and other documents in connection therewith, with the Securities and Exchange Commission, hereby ratifying and confirming all that each of said attorneys-in-fact, or his or her substitute or substitutes, may do or cause to be done by virtue hereof.

Pursuant to the requirements of the Securities Exchange Act of 1934, this Annual Report on Form 10-K has been signed below by the following persons on behalf of the Registrant and in the capacities and on the dates indicated.

Signature	Title	Date
/S/ SUNDAR PICHAI **Sundar Pichai**	Chief Executive Officer and Director (Principal Executive Officer)	February 3, 2020
/S/ RUTH M. PORAT **Ruth M. Porat**	Senior Vice President and Chief Financial Officer (Principal Financial Officer)	February 3, 2020
/S/ AMIE THUENER O'TOOLE **Amie Thuener O'Toole**	Vice President and Chief Accounting Officer (Principal Accounting Officer)	February 3, 2020
/S/ FRANCES H. ARNOLD **Frances H. Arnold**	Director	February 3, 2020
/S/ SERGEY BRIN **Sergey Brin**	Co-Founder and Director	February 3, 2020
/S/ L. JOHN DOERR **L. John Doerr**	Director	February 3, 2020
/S/ ROGER W. FERGUSON, JR. **Roger W. Ferguson, Jr.**	Director	February 3, 2020
/S/ JOHN L. HENNESSY **John L. Hennessy**	Director, Chair	February 3, 2020
/S/ ANN MATHER **Ann Mather**	Director	February 3, 2020
/S/ ALAN R. MULALLY **Alan R. Mulally**	Director	February 3, 2020
/S/ LARRY PAGE **Larry Page**	Co-Founder and Director	February 3, 2020
/S/ K. RAM SHRIRAM **K. Ram Shriram**	Director	February 3, 2020
/S/ Robin L. Washington **Robin L. Washington**	Director	February 3, 2020