

Supplemental Listing Document

If you are in any doubt as to any aspect of this document, you should consult your stockbroker or other registered dealer in securities, bank manager, solicitor, accountant or other professional adviser.

Application has been made to the Singapore Exchange Securities Trading Limited (the “**SGX-ST**”) for permission to deal in and for quotation of the Certificates (as defined below). The SGX-ST assumes no responsibility for the correctness of any statements made or opinions or reports expressed in this document, makes no representation as to its accuracy or completeness and expressly disclaims any liability whatsoever for any loss howsoever arising from or in reliance upon the whole or any part of the contents of this document. Admission to the Official List of the SGX-ST is not to be taken as an indication of the merits of SG Issuer, Société Générale, the Certificates, or the Company (as defined below).

2,700,000 European Style Cash Settled Short Certificates
relating to the Class A Common Stock of Alphabet Inc.
with a Daily Leverage of -3x

issued by

SG Issuer

(Incorporated in Luxembourg with limited liability)

unconditionally and irrevocably guaranteed by

Société Générale

Issue Price: S\$4.00 per Certificate

This document is published for the purpose of obtaining a listing of all the above certificates (the “**Certificates**”) to be issued by SG Issuer (the “**Issuer**”) unconditionally and irrevocably guaranteed by Société Générale (the “**Guarantor**”), and is supplemental to and should be read in conjunction with a base listing document dated 14 June 2024 including such further base listing documents as may be issued from time to time, as supplemented by an addendum dated 30 September 2024 (the “**Base Listing Document**”), for the purpose of giving information with regard to the Issuer, the Guarantor and the Certificates. Information relating to the Company (as defined below) is contained in this document.

This document does not constitute or form part of any offer, or invitation, to subscribe for or to sell, or solicitation of any offer to subscribe for or to purchase, Certificates or other securities of the Issuer, nor is it calculated to invite, nor does it permit the making of, offers by the public to subscribe for or purchase for cash or other consideration the Certificates or other securities of the Issuer.

Restrictions have been imposed on offers and sales of the Certificates and on distributions of documents relating thereto in Singapore, Hong Kong, the European Economic Area, the United Kingdom and the United States (see “Placing and Sale” contained herein).

The Certificates are complex products. You should exercise caution in relation to them. Investors are warned that the price of the Certificates may fall in value as rapidly as it may rise and holders may sustain a total loss of their investment. The price of the Certificates also depends on the supply and demand for the Certificates in the market and the price at which the Certificates is trading at any time may differ from the underlying valuation of the Certificates because of market inefficiencies. It is not possible to predict the secondary market for the Certificates. Although the Issuer, the Guarantor and/or any of their affiliates may from time to time purchase the Certificates or sell additional Certificates on the market, the Issuer, the Guarantor and/or any of their affiliates are not obliged to do so. Investors should also note that there are leveraged risks because the Certificates integrate an inverse leverage mechanism and the Certificates will amplify the movements in the increase, and in the decrease, of the value of the Underlying Stock (as defined below) and if the investment results in a loss, any such loss will be increased by the leverage factor of the Certificates. As such, investors could lose more than they would if they had invested directly in the Underlying Stock.

The Certificates are classified as capital markets products other than prescribed capital markets products¹ and Specified Investment Products (SIPs)², and may only be sold to retail investors with enhanced safeguards, including an assessment of such investors' investment knowledge or experience.

The Certificates constitute general unsecured obligations of the Issuer (in the case of any substitution of the Issuer in accordance with the Conditions of the Certificates, the Substituted Obligor as defined in the Conditions of the Certificates) and of no other person, and the guarantee dated 14 June 2024 (the "**Guarantee**") and entered into by the Guarantor constitutes direct unconditional unsecured senior preferred obligations of the Guarantor and of no other person, and if you purchase the Certificates, you are relying upon the creditworthiness of the Issuer and the Guarantor and have no rights under the Certificates against any other person.

Application has been made to the SGX-ST for permission to deal in and for quotation of the Certificates and the SGX-ST has agreed in principle to grant permission to deal in and for quotation of the Certificates. It is expected that dealings in the Certificates will commence on or about 8 October 2024.

As of the date hereof, the Guarantor's long term credit rating by S&P Global Ratings is A, and by Moody's Investors Service, Inc. is A1.

The Issuer is regulated by the Luxembourg Commission de Surveillance du Secteur Financier on a consolidated basis and the Guarantor is regulated by, *inter alia*, the Autorité des Marchés Financiers, the Autorité de Contrôle Prudentiel et de Résolution and the European Central Bank.

7 October 2024

¹ As defined in the Securities and Futures (Capital Markets Products) Regulations 2018.

² As defined in the MAS Notice SFA 04-N12: Notice on the Sale of Investment Products and MAS Notice FAA-N16: Notice on Recommendations on Investment Products.

Subject as set out below, the Issuer and the Guarantor accept full responsibility for the accuracy of the information contained in this document and the Base Listing Document in relation to themselves and the Certificates. To the best of the knowledge and belief of the Issuer and the Guarantor (each of which has taken all reasonable care to ensure that such is the case), the information contained in this document and the Base Listing Document for which they accept responsibility (subject as set out below in respect of the information contained herein with regard to the Company) is in accordance with the facts and does not omit anything likely to affect the import of such information. The information with regard to the Company as set out herein is extracted from publicly available information. The Issuer and the Guarantor accept responsibility only for the accurate reproduction of such information. No further or other responsibility or liability in respect of such information is accepted by the Issuer and the Guarantor.

No person has been authorised to give any information or to make any representation other than those contained in this document in connection with the offering of the Certificates, and, if given or made, such information or representations must not be relied upon as having been authorised by the Issuer or the Guarantor. Neither the delivery of this document nor any sale made hereunder shall under any circumstances create any implication that there has been no change in the affairs of the Issuer, the Guarantor or their respective subsidiaries and associates since the date hereof.

This document does not constitute an offer or invitation by or on behalf of the Issuer or the Guarantor to purchase or subscribe for any of the Certificates. The distribution of this document and the offering of the Certificates may, in certain jurisdictions, be restricted by law. The Issuer and the Guarantor require persons into whose possession this document comes to inform themselves of and observe all such restrictions. In particular, the Certificates and the Guarantee have not been and will not be registered under the United States Securities Act of 1933, as amended or any state securities law, and trading in the Certificates has not been approved by the United States Commodity Futures Trading Commission (the “**CFTC**”) under the United States Commodity Exchange Act of 1936, as amended and the Issuer has not been and will not be registered as an investment company under the United States Investment Company Act of 1940, as amended, and the rules and regulations thereunder. None of the Securities and Exchange Commission, any state securities commission or regulatory authority or any other United States, French or other regulatory authority has approved or disapproved of the Certificates or the Guarantee or passed upon the accuracy or adequacy of this document. Accordingly, Certificates, or interests therein, may not at any time be offered, sold, resold, traded, pledged, exercised, redeemed, transferred or delivered, directly or indirectly, in the United States or to, or for the account or benefit of, U.S. persons, nor may any U.S. person at any time trade, own, hold or maintain a position in the Certificates or any interests therein. In addition, in the absence of relief from the CFTC, offers, sales, re-sales, trades, pledges, exercises, redemptions, transfers or deliveries of Certificates, or interests therein, directly or indirectly, in the United States or to, or for the account or benefit of, U.S. persons, may constitute a violation of United States law governing commodities trading and commodity pools. Consequently, any offer, sale, resale, trade, pledge, exercise, redemption, transfer or delivery made, directly or indirectly, within the United States or to, or for the account or benefit of, a U.S. person will not be recognised. A further description of certain restrictions on offering and sale of the Certificates and distribution of this document is given in the section headed “Placing and Sale” contained herein.

The SGX-ST has made no assessment of, nor taken any responsibility for, the financial soundness of the Issuer or the Guarantor or the merits of investing in the Certificates, nor have they verified the accuracy or the truthfulness of statements made or opinions expressed in this document.

The Issuer, the Guarantor and/or any of their affiliates may repurchase Certificates at any time on or after the date of issue and any Certificates so repurchased may be offered from time to time in one or more transactions in the over-the-counter market or otherwise at prevailing market

prices or in negotiated transactions, at the discretion of the Issuer, the Guarantor and/or any of their affiliates. Investors should not therefore make any assumption as to the number of Certificates in issue at any time.

References in this document to the “**Conditions**” shall mean references to the Terms and Conditions of the European Style Cash Settled Long/Short Certificates on Single Equities contained in the Base Listing Document. Terms not defined herein shall have the meanings ascribed thereto in the Conditions.

Table of Contents

	<i>Page</i>
Risk Factors	6
Terms and Conditions of the Certificates	17
Terms and Conditions of the European Style Cash Settled Long/Short Certificates on Single Equities	27
Summary of the Issue	44
Information relating to the European Style Cash Settled Short Certificates on Single Equities	46
Information relating to the Company	61
Information relating to the Designated Market Maker	62
Supplemental General Information	64
Placing and Sale	66
Appendix	

RISK FACTORS

The following are risk factors relating to the Certificates:

- (a) in respect of certain corporate adjustment events on the Underlying Stock, trading in the Certificates may be suspended on the relevant ex-date of the Underlying Stock and trading in the Certificates will resume on the next immediate trading day on the SGX-ST. Please note that trading in the Certificates on the SGX-ST may be suspended for more than one trading day in certain circumstances;
- (b) circuit breakers are automatic mechanisms adopted in the U.S. stock market. Circuit breakers are invoked if the stock markets experience extreme broad-based declines or extreme volatility within a single stock, which are designed to slow the effects of extreme price movement through coordinated trading halts across securities markets in the U.S. stock market when severe price declines reach levels that may exhaust market liquidity.

Circuit breakers implemented by the Relevant Stock Exchange for the Underlying Stock may result in a temporary trading halt of the Underlying Stock on the Relevant Stock Exchange for the Underlying Stock, or under extreme circumstances, closure of the U.S. stock market (including all trading on the Relevant Stock Exchange for the Underlying Stock) before normal close of the trading session in the U.S. stock market.

Investors should be aware of the risk of potential high volatility in the trading prices of the Certificates upon commencement and throughout the trading hours of the SGX-ST on a trading day in Singapore in response to any overnight trigger of circuit breakers resulting in temporary trading halt of the Underlying Stock during the trading day of the Relevant Stock Exchange for the Underlying Stock immediately prior to such Singapore trading day;

- (c) investment in Certificates involves substantial risks including market risk, liquidity risk, and the risk that the Issuer and/or the Guarantor will be unable to satisfy its/their obligations under the Certificates. Investors should ensure that they understand the nature of all these risks before making a decision to invest in the Certificates. You should consider carefully whether Certificates are suitable for you in light of your experience, objectives, financial position and other relevant circumstances. Certificates are not suitable for inexperienced investors;
- (d) the Certificates constitute general unsecured obligations of the Issuer (in the case of any substitution of the Issuer in accordance with the Conditions of the Certificates, the Substituted Obligor as defined in the Conditions of the Certificates) and of no other person, and the Guarantee constitutes direct unconditional unsecured senior preferred obligations of the Guarantor and of no other person. In particular, it should be noted that the Issuer issues a large number of financial instruments, including Certificates, on a global basis and, at any given time, the financial instruments outstanding may be substantial. If you purchase the Certificates, you are relying upon the creditworthiness of the Issuer and the Guarantor and have no rights under the Certificates against any other person;
- (e) since the Certificates relate to the price of the Underlying Stock, certain events relating to the Underlying Stock may cause adverse movements in the value and the price of the Underlying Stock, as a result of which, the Certificate Holders (as defined in the Conditions of the Certificates) may, in extreme circumstances, sustain a significant loss of their investment if the price of the Underlying Stock has risen sharply;
- (f) due to their nature, the Certificates can be volatile instruments and may be subject to considerable fluctuations in value. The price of the Certificates may fall in value as rapidly as

it may rise due to, including but not limited to, variations in the frequency and magnitude of the changes in the price of the Underlying Stock, the time remaining to expiry, the currency exchange rates and the creditworthiness of the Issuer and the Guarantor;

- (g) if, whilst any of the Certificates remain unexercised, trading in the Underlying Stock is suspended or halted on the relevant stock exchange, trading in the Certificates may be suspended for a similar period.

The suspension may be lifted and trading in the Underlying Stock may resume outside or during the trading hours of the SGX-ST. If trading in the Underlying Stock resumes, trading in the Certificates will resume either in accordance with the scheduled trading resumption timing (if any) as specified in the announcement(s) to be published in respect of the resumption of trading in the Underlying Stock. Please note that the price of the Certificates may be highly volatile following the resumption of trading in the Certificates;

- (h) as indicated in the Conditions of the Certificates and herein, a Certificate Holder must tender a specified number of Certificates at any one time in order to exercise. Thus, Certificate Holders with fewer than the specified minimum number of Certificates in a particular series will either have to sell their Certificates or purchase additional Certificates, incurring transactions costs in each case, in order to realise their investment;
- (i) investors should note that in the event of there being a Market Disruption Event (as defined in the Conditions) determination or payment of the Cash Settlement Amount (as defined in the Conditions) may be delayed, all as more fully described in the Conditions;
- (j) certain events relating to the Underlying Stock require or, as the case may be, permit the Issuer to make certain adjustments or amendments to the Conditions. Investors may refer to the Conditions 4 and 6 on pages 32 to 37 and the examples and illustrations of adjustments set out in the "Information relating to the European Style Cash Settled Short Certificates on Single Equities" section of this document for more information;
- (k) the Certificates are only exercisable on the Expiry Date and may not be exercised by Certificate Holders prior to such Expiry Date. Accordingly, if on the Expiry Date the Cash Settlement Amount is zero, a Certificate Holder will lose the value of his investment;
- (l) the total return on an investment in any Certificate may be affected by the Hedging Fee Factor (as defined below), Management Fee (as defined below) and Gap Premium (as defined below);
- (m) investors holding their position beyond market close of the SGX-ST should note that they would be required to bear the annualised cost which consists of the Management Fee and Gap Premium, which are calculated daily and applied to the value of the Certificates, as well as certain costs embedded within the Leverage Inverse Strategy (as described below) including the Stock Borrowing Cost (as defined below) and Rebalancing Cost (as defined below). Due to the difference in trading hours of the SGX-ST and the Relevant Stock Exchange for the Underlying Stock, unless investors exit their position within the same SGX-ST trading day, they would bear the annualised costs;
- (n) investors should note that there may be an exchange rate risk relating to the Certificates where the Cash Settlement Amount is converted from a foreign currency into Singapore dollars.

Exchange rates between currencies are determined by forces of supply and demand in the foreign exchange markets. These forces are, in turn, affected by factors such as international balances of payments and other economic and financial conditions, government intervention

in currency markets and currency trading speculation. Fluctuations in foreign exchange rates, foreign political and economic developments, and the imposition of exchange controls or other foreign governmental laws or restrictions applicable to such investments may affect the foreign currency market price and the exchange rate-adjusted equivalent price of the Certificates. Fluctuations in the exchange rate of any one currency may be offset by fluctuations in the exchange rate of other relevant currencies;

- (o) investors should note that there are leveraged risks because the Certificates integrate an inverse leverage mechanism and the Certificates will amplify the movements in the increase, and in the decrease, of the value of the Underlying Stock and if the investment results in a loss, any such loss will be increased by the leverage factor of the Certificates. As such, investors could lose more than they would if they had invested directly in the Underlying Stock;
- (p) when held for longer than a day, the performance of the Certificates could be more or less than the leverage factor that is embedded within the Certificates. The performance of the Certificates each day is locked in, and any subsequent returns are based on what was achieved the previous trading day. This process, referred to as compounding, may lead to a performance difference from 3 times the inverse performance of the Underlying Stock over a period longer than one day. This difference may be amplified in a volatile market with a sideways trend, where market movements are not clear in direction, whereby investors may sustain substantial losses;
- (q) the Underlying Stock to which the Certificates relate are only quoted during US trading hours. This means that the Air Bag Mechanism (as defined below) can only be triggered when the SGX-ST is not open for trading. There is therefore a specific risk that overnight, investors in the Certificates incur a significant or even entire loss of the amounts invested in the Certificates, without being able to exit their investments in the Certificates;
- (r) investors should note that the Air Bag Mechanism reduces the impact on the Leverage Inverse Strategy if the Underlying Stock rises further, but will also maintain a reduced exposure to the Underlying Stock in the event the Underlying Stock starts to fall after the Air Bag Mechanism is triggered, thereby reducing its ability to recoup losses;
- (s) there is no assurance that the Air Bag Mechanism will prevent investors from losing the entire value of their investment, in the event of (i) an overnight increase in the Underlying Stock, where there is an approximately 33% or greater gap between the previous trading day closing price and the opening price of the Underlying Stock the following trading day, as the Air Bag Mechanism will only be triggered when market opens the following trading day or (ii) a sharp intraday increase in the price of the Underlying Stock of approximately 33% or greater within the 15 minutes Observation Period compared to the reference price, being: (1) if air bag has not been previously triggered on the same day, the previous closing price of the Underlying Stock, or (2) if one or more air bag have been previously triggered on the same day, the latest New Observed Price. Investors should note that the Air Bag Mechanism may only be triggered during the trading of the Relevant Stock Exchange for the Underlying Stock. Investors may refer to pages 54 to 55 of this document for more information;
- (t) investors should note that the Certificates are issued over an Underlying Stock which is listed on an exchange with different trading hours from the SGX-ST. There may be a risk arising from the time difference between the trading hours of the Relevant Stock Exchange for the Underlying Stock (based on New York time) and the trading hours of the SGX-ST. As such, (i) the price of the Underlying Stock may not be available during the trading hours of the Certificates on SGX-ST; (ii) Air Bag Mechanism may be triggered during the trading hours of

the Relevant Stock Exchange for the Underlying Stock, which would not be during SGX-ST trading hours; (iii) the trigger of an Air Bag Mechanism, when the Certificates are not open for trading, will lead to a different Leverage Inverse Strategy Closing Level, i.e. the value of the Certificates subsequently during the SGX-ST trading hours will be based on a different Leverage Inverse Strategy Closing Level reference for the purpose of the Leveraged Return calculation compared to a case where no Air Bag Mechanism would have been triggered; and (iv) given the Relevant Stock Exchange for the Underlying Stock is not open for trading during the SGX-ST trading hours, the market price of the Certificates may be affected by the derived spot price of the Underlying Stock on the Related Exchange during SGX-ST trading hours (which may deviate from the published price of the Underlying Stock), consequentially the market price of the Certificates during SGX-ST trading hours may deviate from the published price of the Underlying Stock during the US trading hours on the same day. There is therefore a specific risk that investors in the Certificates may incur a significant or even entire loss of the amounts invested in the Certificates, without being able to exit their investments in the Certificates.

In particular, please note that the trading price of the Underlying Stock may be volatile during a time in which the SGX-ST is not open for trading of the Certificates. Outside the trading hours of the SGX-ST, investors will not be able to sell or trade in the Certificates even if the trading price of the Underlying Stock is highly volatile.

Market news and/or corporate announcements relating to the Underlying Stock (including corporate event announcements or other price sensitive information) may be released outside the trading hours of the Relevant Stock Exchange for the Underlying Stock (based on New York time), but during the trading hours of the SGX-ST (based on Singapore time). The trading price of the Certificates may become highly volatile during the relevant trading hours of the SGX-ST in response to such market/corporate news pending opening of the Underlying Stock. The market and investors may not have sufficient time to digest fully, and/or assess the potential impact of, such corporate news on the Underlying Stock and hence the Certificates.

Investors may refer to pages 54 to 55 of this document for more information;

- (u) certain events may, pursuant to the terms and conditions of the Certificates, trigger (i) the implementation of methods of adjustment or (ii) the early termination of the Certificates. The Certificates may be terminated prior to its Expiry Date for the following reasons which are not exhaustive: Illegality and force majeure, occurrence of a Holding Limit Event (as defined in the Conditions of the Certificates) or Hedging Disruption (as defined in the Conditions of the Certificates). For more detailed examples of when early termination may occur, please refer to the FAQ section under the "Education" tab on the website at dlc.socgen.com.

The Issuer will give the investors reasonable notice of any early termination. If the Issuer terminates the Certificates early, the Issuer will, if and to the extent permitted by applicable law, pay an amount to each Certificate Holder in respect of each Certificate held by such holder equal to the fair market value of the Certificate less the cost to the Issuer of unwinding any underlying related hedging arrangements, all as determined by the Issuer in its sole and absolute discretion. The performance of this commitment shall depend on (i) general market conditions and (ii) the liquidity conditions of the underlying instrument(s) and, as the case may be, of any other hedging transactions. Investors should note that the amount repaid by the Issuer may be substantially less than the amount initially invested, and at the worst case, be zero. Investors may refer to the Condition 13 on pages 39 to 42 of this document for more information;

- (v) there is no assurance that an active trading market for the Certificates will sustain throughout the life of the Certificates, or if it does sustain, it may be due to market making on the part of the Designated Market Maker. The Issuer acting through its Designated Market Maker may be the only market participant buying and selling the Certificates. Therefore, the secondary market for the Certificates may be limited and you may not be able to realise the value of the Certificates. Do note that the bid-ask spread increases with illiquidity;
- (w) in the ordinary course of their business, including without limitation, in connection with the Issuer or its appointed designated market maker's market making activities, the Issuer, the Guarantor and any of their respective subsidiaries and affiliates may effect transactions for their own account or for the account of their customers and hold long or short positions in the Underlying Stock. In addition, in connection with the offering of any Certificates, the Issuer, the Guarantor and any of their respective subsidiaries and affiliates may enter into one or more hedging transactions with respect to the Underlying Stock. In connection with such hedging or market-making activities or with respect to proprietary or other trading activities by the Issuer, the Guarantor and any of their respective subsidiaries and affiliates, the Issuer, the Guarantor and any of their respective subsidiaries and affiliates may enter into transactions in the Underlying Stock which may affect the market price, liquidity or value of the Certificates and which may affect the interests of Certificate Holders;
- (x) various potential and actual conflicts of interest may arise from the overall activities of the Issuer, the Guarantor and/or any of their subsidiaries and affiliates.

The Issuer, the Guarantor and any of their subsidiaries and affiliates are diversified financial institutions with relationships in countries around the world. These entities engage in a wide range of commercial and investment banking, brokerage, funds management, hedging transactions and investment and other activities for their own account or the account of others. In addition, the Issuer, the Guarantor and any of their subsidiaries and affiliates, in connection with their other business activities, may possess or acquire material information about the Underlying Stock. Such activities and information may involve or otherwise affect issuers of the Underlying Stock in a manner that may cause consequences adverse to the Certificate Holders or otherwise create conflicts of interests in connection with the issue of Certificates by the Issuer. Such actions and conflicts may include, without limitation, the exercise of voting power, the purchase and sale of securities, financial advisory relationships and exercise of creditor rights. The Issuer, the Guarantor and any of their subsidiaries and affiliates have no obligation to disclose such information about the Underlying Stock or such activities. The Issuer, the Guarantor and any of their subsidiaries and affiliates and their officers and directors may engage in any such activities without regard to the issue of Certificates by the Issuer or the effect that such activities may directly or indirectly have on any Certificate;

- (y) legal considerations which may restrict the possibility of certain investments:

Some investors' investment activities are subject to specific laws and regulations or laws and regulations currently being considered by various authorities. All potential investors must consult their own legal advisers to check whether and to what extent (i) they can legally purchase the Certificates (ii) the Certificates can be used as collateral security for various forms of borrowing (iii) if other restrictions apply to the purchase of Certificates or their use as collateral security. Financial institutions must consult their legal advisers or regulators to determine the appropriate treatment of the Certificates under any applicable risk-based capital or similar rules;

- (z) the credit rating of the Guarantor is an assessment of its ability to pay obligations, including those on the Certificates. Consequently, actual or anticipated declines in the credit rating of the Guarantor may affect the market value of the Certificates;
- (aa) the Certificates are linked to the Underlying Stock and subject to the risk that the price of the Underlying Stock may rise. The following is a list of some of the significant risks associated with the Underlying Stock:
- Historical performance of the Underlying Stock does not give an indication of future performance of the Underlying Stock. It is impossible to predict whether the price of the Underlying Stock will fall or rise over the term of the Certificates; and
 - The price of the Underlying Stock may be affected by the economic, financial and political events in one or more jurisdictions, including the stock exchange(s) or quotation system(s) on which the Underlying Stock may be traded;
- (bb) the value of the Certificates depends on the Leverage Inverse Strategy performance built in the Certificate. The Calculation Agent will make the Leverage Inverse Strategy last closing level and a calculation tool available to the investors on a website;
- (cc) two or more risk factors may simultaneously have an effect on the value of a Certificate such that the effect of any individual risk factor may not be predicted. No assurance can be given as to the effect any combination of risk factors may have on the value of a Certificate;
- (dd) as the Certificates are represented by a global warrant certificate which will be deposited with The Central Depository (Pte) Limited (“**CDP**”):
- (i) investors should note that no definitive certificate will be issued in relation to the Certificates;
 - (ii) there will be no register of Certificate Holders and each person who is for the time being shown in the records maintained by CDP as entitled to a particular number of Certificates by way of interest (to the extent of such number) in the global warrant certificate in respect of those Certificates represented thereby shall be treated as the holder of such number of Certificates;
 - (iii) investors will need to rely on any statements received from their brokers/custodians as evidence of their interest in the Certificates; and
 - (iv) notices to such Certificate Holders will be published on the web-site of the SGX-ST. Investors will need to check the web-site of the SGX-ST regularly and/or rely on their brokers/custodians to obtain such notices;
- (ee) U.S. withholding tax

The Issuer has determined that these Certificates are not “delta-one” instruments for the purposes of IRS Notice 2024-44 and are therefore not Specified Warrants for purposes of the Section 871(m) Regulations as discussed in the accompanying Base Listing Document under “TAXATION—TAXATION IN THE UNITED STATES OF AMERICA—Section 871(m) of the U.S. Internal Revenue Code of 1986”. Investors are advised that the Issuer’s determination is binding on all Non-U.S. Holders of the Certificates, but it is not binding on the United States Internal Revenue Service (the “IRS”) and the IRS may therefore disagree with the Issuer’s determination. In addition, if any Holder of Certificates also holds an offsetting position in the Underlying Stock that when combined with the Certificates provide “delta-one” exposure to the Underlying Stock, such Holder may have liability under Section 871(m). Certificate Holders should consult with their own tax advisers regarding the potential application of

Section 871(m) to the Certificates, including with respect to any other positions the Certificate Holder holds in the Underlying Stock.

Potential investors are advised to consider the discussion in the accompanying Base Listing Document under “TAXATION—TAXATION IN THE UNITED STATES OF AMERICA—Section 871(m) of the U.S. Internal Revenue Code of 1986” and “TAXATION—TAXATION IN THE UNITED STATES OF AMERICA—Foreign Account Tax Compliance Act Withholding” and to consult their own tax adviser on the tax impacts of the acquisition, holding, disposal and redemption of the Certificates. The requirement to pay such taxes may reduce the effective yield on the Certificates and may also have an adverse impact on their value;

- (ff) risks arising from the taxation of securities

Tax law and practice are subject to change, possibly with retroactive effect. This may have a negative impact on the value of the Certificates and/or the market price of the Certificates. For example, the specific tax assessment of the Certificates may change compared to its assessment at the time of purchase of the Certificates. This is especially true with regard to derivative Certificates and their tax treatment. Holders of Certificates therefore bear the risk that they may misjudge the taxation of the income from the purchase of the Certificates. However, there is also the possibility that the taxation of the income from the purchase of the Certificates will change to the detriment of the holders.

Holders of the Certificates bear the risk that the specific tax assessment of the Certificates will change. This can have a negative impact on the value of the Certificates and the investor may incur a corresponding loss. The stronger this negative effect, the greater the loss may be; and

- (gg) risk factors relating to the BRRD

French and Luxembourg law and European legislation regarding the resolution of financial institutions may require the write-down or conversion to equity of the Certificates or other resolution measures if the Issuer or the Guarantor is deemed to meet the conditions for resolution.

Directive 2014/59/EU of the European Parliament and of the Council of the European Union dated 15 May 2014 establishing a framework for the recovery and resolution of credit institutions and investment firms (the “BRRD”) entered into force on 2 July 2014. The BRRD, as amended, has been implemented into Luxembourg law by, among others, the Luxembourg act dated 18 December 2015 on the failure of credit institutions and certain investment firms, as amended (the “BRR Act 2015”). Under the BRR Act 2015, the competent authority is the Luxembourg financial sector supervisory authority (*Commission de surveillance du secteur financier*, the CSSF) and the resolution authority is the CSSF acting as resolution council (*conseil de résolution*).

In April 2023, the EU Commission released a proposal to amend, in particular, the BRRD according to which senior preferred debt instruments would no longer rank pari passu with any non covered non preferred deposits of the Issuer; instead, senior preferred debt instruments would rank junior in right of payment to the claims of all depositors.

This proposal has been discussed and amended by the European Parliament and the European Council. Council and Parliament reached agreement on 6 December 2023 to make the proposal final and applicable. If the final agreement was adopted as is, there may be an increased risk of an investor in senior preferred debt instruments losing all or some of their

investment in the context of the exercise of the Bail-in Power. The final agreement may also lead to a rating downgrade for senior preferred debt instruments.

Moreover, Regulation (EU) No. 806/2014 of the European Parliament and of the Council of 15 July 2014 establishing uniform rules and a uniform procedure for the resolution of credit institutions and certain investment firms in the framework of a Single Resolution Mechanism (“**SRM**”) and a Single Resolution Framework (the “**SRM Regulation**”) has established a centralised power of resolution entrusted to a Single Resolution Board (the “**SRB**”) in cooperation with the national resolution authorities.

Since November 2014, the European Central Bank (“**ECB**”) has taken over the prudential supervision of significant credit institutions in the member states of the Eurozone under the Single Supervisory Mechanism (“**SSM**”). In addition, the SRM has been put in place to ensure that the resolution of credit institutions and certain investment firms across the Eurozone is harmonised. As mentioned above, the SRM is managed by the SRB. Under Article 5(1) of the SRM Regulation, the SRM has been granted those responsibilities and powers granted to the EU Member States’ resolution authorities under the BRRD for those credit institutions and certain investment firms subject to direct supervision by the ECB. The ability of the SRB to exercise these powers came into force at the beginning of 2016.

Societe Generale has been, and continues to be, designated as a significant supervised entity for the purposes of Article 49(1) of Regulation (EU) No 468/2014 of the ECB of 16 April 2014 establishing the framework for cooperation within the SSM between the ECB and national competent authorities and with national designated authorities (the “**SSM Regulation**”) and is consequently subject to the direct supervision of the ECB in the context of the SSM. This means that Societe Generale and SG Issuer (being covered by the consolidated prudential supervision of Societe Generale) are also subject to the SRM which came into force in 2015. The SRM Regulation mirrors the BRRD and, to a large part, refers to the BRRD so that the SRB is able to apply the same powers that would otherwise be available to the relevant national resolution authority.

The stated aim of the BRRD and the SRM Regulation is to provide for the establishment of an EU-wide framework for the recovery and resolution of credit institutions and certain investment firms. The regime provided for by the BRRD is, among other things, stated to be needed to provide the resolution authority designated by each EU Member State (the “**Resolution Authority**”) with a credible set of tools to intervene sufficiently early and quickly in an unsound or failing institution so as to ensure the continuity of the institution’s critical financial and economic functions while minimising the impact of an institution’s failure on the economy and financial system (including taxpayers’ exposure to losses).

In accordance with the provisions of the SRM Regulation, when applicable, the SRB, has replaced the national resolution authorities designated under the BRRD with respect to all aspects relating to the decision-making process and the national resolution authorities designated under the BRRD continue to carry out activities relating to the implementation of resolution schemes adopted by the SRB. The provisions relating to the cooperation between the SRB and the national resolution authorities for the preparation of the institutions’ resolution plans have applied since 1 January 2015 and the SRM has been fully operational since 1 January 2016.

The SRB is the Resolution Authority for the Issuer and the Guarantor.

The powers provided to the Resolution Authority in the BRRD and the SRM Regulation include write-down/conversion powers to ensure that capital instruments (including

subordinated debt instruments) and eligible liabilities (including senior debt instruments if junior instruments prove insufficient to absorb all losses) absorb losses of the issuing institution that is subject to resolution in accordance with a set order of priority (the “**Bail-in Power**”). The conditions for resolution under the SRM Regulation are deemed to be met when: (i) the Resolution Authority determines that the institution is failing or is likely to fail, (ii) there is no reasonable prospect that any measure other than a resolution measure would prevent the failure within a reasonable timeframe, and (iii) a resolution measure is necessary for the achievement of the resolution objectives (in particular, ensuring the continuity of critical functions, avoiding a significant adverse effect on the financial system, protecting public funds by minimizing reliance on extraordinary public financial support, and protecting client funds and assets) and winding up of the institution under normal insolvency proceedings would not meet those resolution objectives to the same extent.

The Resolution Authority could also, independently of a resolution measure or in combination with a resolution measure, fully or partially write-down or convert capital instruments (including subordinated debt instruments) into equity when it determines that the institution or its group will no longer be viable unless such write-down or conversion power is exercised or when the institution requires extraordinary public financial support (except when extraordinary public financial support is provided in Article 10 of the SRM Regulation). The terms and conditions of the Certificates contain provisions giving effect to the Bail-in Power in the context of resolution and write-down or conversion of capital instruments at the point of non-viability.

The Bail-in Power could result in the full (i.e., to zero) or partial write-down or conversion of the Certificates into ordinary shares or other instruments of ownership, or the variation of the terms of the Certificates (for example, the maturity and/or interest payable may be altered and/or a temporary suspension of payments may be ordered). Extraordinary public financial support should only be used as a last resort after having assessed and applied, to the maximum extent practicable, the resolution measures. No support will be available until a minimum amount of contribution to loss absorption and recapitalization of 8% of total liabilities including own funds has been made by shareholders, holders of capital instruments and other eligible liabilities through write-down, conversion or otherwise.

In addition to the Bail-in Power, the BRRD and the SRM Regulation provide the Resolution Authority with broader powers to implement other resolution measures with respect to institutions that meet the conditions for resolution, which may include (without limitation) the sale of the institution’s business, the creation of a bridge institution, the separation of assets, the replacement or substitution of the institution as obligor in respect of debt instruments, modifications to the terms of debt instruments (including altering the maturity and/or the amount of interest payable and/or imposing a temporary suspension on payments), removing management, appointing an interim administrator, and discontinuing the listing and admission to trading of financial instruments.

The BRRD, the BRR Act 2015 and the SRM Regulation however also state that, under exceptional circumstances, if the bail-in instrument is applied, the SRB, in cooperation with the CSSF, may completely or partially exclude certain liabilities from the application of the impairment or conversion powers under certain conditions.

Since 1 January 2016, EU credit institutions (such as Societe Generale) and certain investment firms have to meet, at all times, a minimum requirement for own funds and eligible liabilities (“**MREL**”) pursuant to Article 12 of the SRM Regulation. The MREL, which is expressed as a percentage of the total liabilities and own funds of the institution, aims at

preventing institutions from structuring their liabilities in a manner that impedes the effectiveness of the Bail-in Power in order to facilitate resolution.

The regime has evolved as a result of the changes adopted by the EU legislators. On 7 June 2019, as part of the contemplated amendments to the so-called “EU Banking Package”, the following legislative texts were published in the Official Journal of the EU 14 May 2019:

- Directive (EU) 2019/879 of the European Parliament and of the Council of 20 May 2019 amending the BRRD as regards the loss-absorbing and recapitalisation capacity of credit institutions and investment firms (“**BRRD II**”); and
- Regulation (EU) 2019/877 of the European Parliament and of the Council of 20 May 2019 amending the SRM Regulation as regards the loss-absorbing and recapitalisation capacity (“**TLAC**”) of credit institutions and investment firms (the “**SRM II Regulation**” and, together with the BRRD II, the “**EU Banking Package Reforms**”).

The EU Banking Package Reforms introduced, among other things, the TLAC standard as implemented by the Financial Stability Board's TLAC Term Sheet (“**FSB TLAC Term Sheet**”), by adapting, among other things, the existing regime relating to the specific MREL with aim of reducing risks in the banking sector and further reinforcing institutions’ ability to withstand potential shocks will strengthen the banking union and reduce risks in the financial system.

The TLAC has been implemented in accordance with the FSB TLAC Term Sheet, which impose a level of “Minimum TLAC” that will be determined individually for each global systemically important bank (“**G-SIB**”), such as Societe Generale, in an amount at least equal to (i) 16%, plus applicable buffers, of risk weight assets since January 1, 2022 and 18%, plus applicable buffers, thereafter and (ii) 6% of the Basel III leverage ratio denominator since January 1, 2022 and 6.75% thereafter (each of which could be extended by additional firm-specific requirements).

Regulation (EU) No 575/2013 of the European Parliament and of the Council of 26 June 2013 on prudential requirements for credit institutions and investment firms (the “**CRR**”), as amended notably by Regulation (EU) 2019/876 as regards the leverage ratio, the net stable funding ratio, requirements for own funds and eligible liabilities, counterparty credit risk, market risk, exposures to central counterparties, exposures to collective investment undertakings, large exposures, reporting and disclosure requirements (the “**CRR II**”) and Regulation (EU) 2022/2036 of the European Parliament and of the Council of 19 October 2022 amending Regulation (EU) No 575/2013 and Directive 2014/59/EU as regards the prudential treatment of global systemically important institutions with a multiple-point-of-entry resolution strategy and methods for the indirect subscription of instruments eligible for meeting the minimum requirement for own funds and eligible liabilities, EU G-SIBs, such as Societe Generale, have to comply with TLAC requirements, on top of the MREL requirements, since the entry into force of the CRR II. As such, G-SIBs, such as Societe Generale have to comply with both the TLAC and MREL requirements.

Consequently, the criteria for MREL-eligible liabilities have been closely aligned with the criteria for TLAC-eligible liabilities under CRR II, but subject to the complementary adjustments and requirements introduced in the BRRD II. In particular, certain debt instruments with an embedded derivative component, such as certain structured notes, will be eligible, subject to certain conditions, to meet MREL requirements to the extent that they have a fixed or increasing principal amount repayable at maturity that is known in advance

with only an additional return permitted to be linked to that derivative component and dependent on the performance of a reference asset.

The level of capital and eligible liabilities required under MREL is set by the SRB for Societe Generale on an individual and/or consolidated basis based on certain criteria including systemic importance and may also be set for SG Issuer. Eligible liabilities may be senior or subordinated, provided, among other requirements, that they have a remaining term of at least one year and, they recognise contractually the Resolution Authority's power to write down or convert the liabilities governed by non-EU law.

The scope of liabilities used to meet MREL includes, in principle, all liabilities resulting from claims arising from ordinary unsecured creditors (non-subordinated liabilities) unless they do not meet specific eligibility criteria set out in BRRD, as amended notably by BRRD II. To enhance the resolvability of institutions and entities through an effective use of the bail-in tool, the SRB should be able to require that MREL be met with own funds and other subordinated liabilities, in particular where there are clear indications that bailed-in creditors are likely to bear losses in resolution that would exceed the losses that they would incur under normal insolvency proceedings. Moreover the SRB should assess the need to require institutions and entities to meet the MREL with own funds and other subordinated liabilities where the amount of liabilities excluded from the application of the bail-in tool reaches a certain threshold within a class of liabilities that includes MREL-eligible liabilities. Any subordination of debt instruments requested by the SRB for the MREL shall be without prejudice to the possibility to partly meet the TLAC requirements with non-subordinated debt instruments in accordance with the CRR, as amended by the CRR II, as permitted by the TLAC standard. Specific requirements apply to resolution groups with assets above EUR 100 billion (top-tier banks, including Societe Generale).

TERMS AND CONDITIONS OF THE CERTIFICATES

The following are the terms and conditions of the Certificates and should be read in conjunction with, and are qualified by reference to, the other information set out in this document and the Base Listing Document.

The Conditions are set out in the section headed “Terms and Conditions of the European Style Cash Settled Long/Short Certificates on Single Equities” in the Base Listing Document. For the purposes of the Conditions, the following terms shall have the following meanings:

Certificates:	2,700,000 European Style Cash Settled Short Certificates relating to the Class A Common Stock of Alphabet Inc. (the “ Underlying Stock ”)
ISIN:	LU2517562448
Company:	Alphabet Inc. (RIC: GOOGL.OQ)
Underlying Price and Source:	The closing price of the Underlying Stock on 7 October 2024 (Reuters)
Calculation Agent:	Société Générale
Strike Level:	Zero
Daily Leverage:	-3x (within the Leverage Inverse Strategy as described below)
Notional Amount per Certificate:	SGD 4.00
Management Fee (p.a.) ³ :	0.40%
Gap Premium (p.a.) ⁴ :	12.00%, is a hedging cost against extreme market movements beyond US market close on the same trading day.
Stock Borrowing Cost ⁵ :	The annualised costs for borrowing stocks in order to take an inverse exposure on the Underlying Stock.
Rebalancing Cost ⁵ :	The transaction costs (if applicable), computed as a function of leverage and daily inverse performance of the Underlying Stock.
Launch Date:	1 October 2024
Closing Date:	7 October 2024
Expected Listing Date:	8 October 2024

³ Please note that the Management Fee is calculated on a 360-day basis and may be increased up to a maximum of 3% p.a. on giving one month’s notice to investors. Any increase in the Management Fee will be announced on the SGXNET. Please refer to “Fees and Charges” below for further details of the fees and charges payable and the maximum of such fees as well as other ongoing expenses that may be borne by the Certificates.

⁴ Please note that the Gap Premium is calculated on a 360-day basis.

⁵ These costs are embedded within the Leverage Inverse Strategy. Please note that the Stock Borrowing Cost may be changed on giving 5 Business Days’ notice to investors. Any change in the Stock Borrowing Cost will be announced on the SGXNET.

Last Trading Date:	The date falling 5 Business Days immediately preceding the Expiry Date, currently being 29 September 2026
Expiry Date:	The Business Day immediately following the Valuation Date, currently being 6 October 2026
Board Lot:	100 Certificates
Valuation Date:	5 October 2026 or if such day is not an Underlying Stock Business Day, the immediately following Underlying Stock Business Day and subject to the Market Disruption Event provisions.
Settlement Date:	No later than five Settlement Business Days following the Expiry Date, currently being 13 October 2026.
Exercise:	The Certificates may only be exercised on the Expiry Date or if the Expiry Date is not a Business Day, the immediately preceding Business Day, in a Board Lot or integral multiples thereof. Certificate Holders shall not be required to deliver an exercise notice. Exercise of Certificates shall be determined by whether the Cash Settlement Amount (less any Exercise Expenses) is positive. If the Cash Settlement Amount (less any Exercise Expenses) is positive, all Certificates shall be deemed to have been automatically exercised at 10:00 a.m. (Singapore time) on the Expiry Date or if the Expiry Date is not a Business Day, the immediately preceding Business Day. The Cash Settlement Amount less the Exercise Expenses in respect of the Certificates shall be paid in the manner set out in Condition 4(c) of the Conditions. In the event the Cash Settlement Amount (less any Exercise Expenses) is zero, all Certificates shall be deemed to have expired at 10:00 a.m. (Singapore time) on the Expiry Date or if the Expiry Date is not a Business Day, the immediately preceding Business Day, and Certificate Holders shall not be entitled to receive any payment from the Issuer in respect of the Certificates.
Cash Settlement Amount:	In respect of each Certificate, shall be an amount payable in the Settlement Currency equal to: Closing Level multiplied by the Notional Amount per Certificate Please refer to the “Information relating to the European Style Cash Settled Short Certificates on Single Equities” section on pages 46 to 60 of this document for examples and illustrations of the calculation of the Cash Settlement Amount.
Hedging Fee Factor:	In respect of each Certificate, shall be an amount calculated as: Product (for t from 2 to Valuation Date) of $(1 - \text{Management Fee} \times (\text{ACT}(t-1;t) \div 360)) \times (1 - \text{Gap Premium}(t-1) \times (\text{ACT}(t-1;t) \div 360))$ Where: “t” refers to “ Observation Date ” which means each Underlying

Stock Business Day (subject to Market Disruption Event) from (and including) the Underlying Stock Business Day immediately preceding the Expected Listing Date to the Valuation Date; and

ACT (t-1;t) means the number of calendar days between the Underlying Stock Business Day immediately preceding the Observation Date (such Underlying Stock Business Day being noted “t-1”) (included) and the Observation Date “t” (excluded).

If the Issuer determines, in its sole discretion, that on any Observation Date a Market Disruption Event has occurred, then that Observation Date shall be postponed until the first succeeding Underlying Stock Business Day on which there is no Market Disruption Event, unless there is a Market Disruption Event on each of the five Underlying Stock Business Days immediately following the original date that, but for the Market Disruption Event, would have been an Observation Date. In that case, that fifth Underlying Stock Business Day shall be deemed to be the Observation Date notwithstanding the Market Disruption Event and the Issuer shall determine, its good faith estimate of the level of the Leverage Inverse Strategy and the value of the Certificate on that fifth Underlying Stock Business Day in accordance with the formula for and method of calculation last in effect prior to the occurrence of the first Market Disruption Event taking into account, inter alia, the exchange traded or quoted price of the Underlying Stock and the potential increased cost of hedging by the Issuer as a result of the occurrence of the Market Disruption Event.

Please refer to the “Information relating to the European Style Cash Settled Short Certificates on Single Equities” section on pages 46 to 60 of this document for examples and illustrations of the calculation of the Hedging Fee Factor.

Closing Level: In respect of each Certificate, shall be an amount payable in the Settlement Currency equal to:

$$\left(\frac{\text{Final Reference Level} \times \text{Final Exchange Rate}}{\text{Initial Reference Level} \times \text{Initial Exchange Rate}} - \text{Strike Level} \right) \times \text{Hedging Fee Factor}$$

Initial Reference Level: 1,000

Final Reference Level: The closing level of the Leverage Inverse Strategy (as described below) on the Valuation Date

The calculation of the closing level of the Leverage Inverse Strategy is set out in the “Specific Definitions relating to the Leverage Inverse Strategy” section on pages 22 to 26 below.

Initial Exchange Rate: 1.3036

Final Exchange Rate: The rate for the conversion of United States Dollar to Singapore Dollar as at 5:00pm (Singapore Time) on the Valuation Date as shown on Reuters, provided that if the Reuters service ceases to display such information, as determined by the Issuer by reference to such source(s) as the Issuer may reasonably determine to be appropriate at such a time.

Air Bag Mechanism: The “**Air Bag Mechanism**” refers to the mechanism built in the Leverage Inverse Strategy and which is designed to reduce the Leverage Inverse Strategy exposure to the Underlying Stock during extreme market conditions. If the Underlying Stock rises by 20% or more (“**Air Bag Trigger Price**”) during the trading day of the Relevant Stock Exchange for the Underlying Stock (which represents an approximately 60% loss after a 3 times inverse leverage), the Air Bag Mechanism is triggered and the Leverage Inverse Strategy is adjusted intra-day during the trading hours of the Relevant Stock Exchange for the Underlying Stock. The Air Bag Mechanism reduces the impact on the Leverage Inverse Strategy if the Underlying Stock rises further, but will also maintain a reduced exposure to the Underlying Stock in the event the Underlying Stock starts to fall after the Air Bag Mechanism is triggered, thereby reducing its ability to recoup losses.

The Leverage Inverse Strategy is floored at 0 and the Certificates cannot be valued below zero.

Please refer to the “Extraordinary Strategy Adjustment for Performance Reasons (“Air Bag Mechanism”)” section on pages 25 to 26 below and the “Description of Air Bag Mechanism” section on pages 52 to 53 of this document for further information of the Air Bag Mechanism.

Adjustments and Extraordinary Events: The Issuer has the right to make adjustments to the terms of the Certificates if certain events, including any capitalisation issue, rights issue, extraordinary distributions, merger, delisting, insolvency (as more specifically set out in the terms and conditions of the Certificates) occur in respect of the Underlying Stock. For the avoidance of doubt, no notice will be given if the Issuer determines that adjustments will not be made.

Underlying Stock Currency: United States Dollar (“**USD**”)

Settlement Currency: Singapore Dollar (“**SGD**”)

Exercise Expenses: Certificate Holders will be required to pay all charges which are incurred in respect of the exercise of the Certificates.

Relevant Stock Exchange for the Certificates: The Singapore Exchange Securities Trading Limited (“**SGX-ST**”)

Relevant Stock Exchange for the Underlying Stock: NASDAQ

Related Exchange: Each exchange or quotation system, or alternative trading system, where trading has a material effect (as determined by the Calculation Agent) on the overall market for the Underlying Stock when the Relevant Stock Exchange for the Underlying Stock is not open for trading

Underlying Stock Business Day, Business Day or Settlement Business Day: An “**Underlying Stock Business Day**” means a day on which NASDAQ is open for dealings in the United States during its normal trading hours and banks are open for business in the United States.

A “Business Day” or a “Settlement Business Day” is a day on which the SGX-ST is open for dealings in Singapore during its normal trading hours and banks are open for business in Singapore.

Warrant Agent: The Central Depository (Pte) Limited (“**CDP**”)

Clearing System: CDP

Fees and Charges: Normal transaction and brokerage fees shall apply to the trading of the Certificates on the SGX-ST. Investors should note that they may be required to pay stamp taxes or other documentary charges in accordance with the laws and practices of the country where the Certificates are transferred. Investors who are in any doubt as to their tax position should consult their own independent tax advisers. In addition, investors should be aware that tax regulations and their application by the relevant taxation authorities change from time to time. Accordingly, it is not possible to predict the precise tax treatment which will apply at any given time.

Investors holding position beyond market close of the SGX-ST would also be required to bear the Management Fee and Gap Premium, which are calculated daily and applied to the value of the Certificates, as well as certain costs embedded within the Leverage Inverse Strategy including the Stock Borrowing Cost and Rebalancing Cost. The Management Fee may be increased up to a maximum of 3% p.a. on giving one month’s notice to investors in accordance with the terms and conditions of the Certificates. Any increase in the Management Fee will be announced on the SGXNET. Due to the difference in trading hours of the SGX-ST and the Relevant Stock Exchange for the Underlying Stock, unless investors exit their position within the same SGX-ST trading day, they would bear such annualised costs.

Further Information: Please refer to the website at dlc.socgen.com for more information on the theoretical closing price of the Certificates on the previous trading day, the closing price of the Underlying Stock on the previous trading day, the Air Bag Trigger Price for each trading day and the Management Fee and Gap Premium.

Specific Definitions relating to the Leverage Inverse Strategy

Description of the Leverage Inverse Strategy

The Leverage Inverse Strategy is designed to track a 3 times daily leveraged inverse exposure to the Underlying Stock.

At the end of each trading day of the Underlying Stock, the exposure of the Leverage Inverse Strategy to the Underlying Stock is reset within the Leverage Inverse Strategy in order to retain a daily leverage of 3 times the inverse performance of the Underlying Stock (excluding costs) regardless of the performance of the Underlying Stock on the preceding day. This mechanism is referred to as the Daily Reset.

The Leverage Inverse Strategy incorporates an air bag mechanism which is designed to reduce exposure to the Underlying Stock during extreme market conditions, as further described below.

Leverage Inverse Strategy Formula

LSL_t means, for any Observation Date(t), the Leverage Inverse Strategy Closing Level as of such day (t).

Subject to the occurrence of an Intraday Restrike Event, the **Leverage Inverse Strategy Closing Level** as of such Observation Date(t) is calculated in accordance with the following formulae:

On Observation Date(1):

$$LSL_1 = 1000$$

On each subsequent Observation Date(t):

$$LSL_t = \text{Max}[LSL_{t-1} \times (1 + LR_{t-1,t} - FC_{t-1,t} - SB_{t-1,t} - RC_{t-1,t}), 0]$$

LR_{t-1,t} means the Leveraged Return of the Underlying Stock between Observation Date(t-1) and Observation Date(t) closing prices, calculated as follows:

$$LR_{t-1,t} = \text{Leverage} \times \left(\frac{S_t}{S_{t-1} \times R_{\text{factor}_t}} - 1 \right)$$

FC_{t-1,t} means, the Funding Cost between Observation Date(t-1) (included) and Observation Date(t) (excluded) calculated as follows:

$$FC_{t-1,t} = (\text{Leverage} - 1) \times \frac{\text{Rate}_{t-1} \times \text{ACT}(t-1, t)}{\text{DayCountBasisRate}}$$

SB_{t-1,t} means the Stock Borrowing Cost between Observation Date(t-1) (included) and Observation Date(t) (excluded) calculated as follows:

$$SB_{t-1,t} = -\text{Leverage} \times \frac{\text{CB} \times \text{ACT}(t-1, t)}{\text{DayCountBasisRate}}$$

CB means the Cost of Borrowing applicable that is equal to 3.00%.

RC_{t-1,t} means the Rebalancing Cost of the Leverage Inverse Strategy on Observation Date (t), calculated as follows:

$$RC_{t-1,t} = \text{Leverage} \times (\text{Leverage} - 1) \times \left(\left| \frac{S_t}{S_{t-1} \times Rfactor_t} - 1 \right| \right) \times \text{TC}$$

TC	means the Transaction Costs applicable (including brokerage fees and any other applicable taxes, levies and costs which may be levied on the stock transactions on the Relevant Stock Exchange for the Underlying Stock by the applicable regulatory authorities from time to time) that are currently equal to: 0.20%
Leverage	-3
S_t	means, in respect of each Observation Date(t), the Closing Price of the Underlying Stock as of such Observation Date(t), subject to the adjustments and provisions of the Conditions.
Rate_t	means, in respect of each Observation Date(t), the US SOFR Secured Overnight Financing Rate, as published on Bloomberg Screen SOFRRATE Index page or any successor page, being the rate as of such Observation Date (t), provided that if any of such rates is not available, then that rate shall be determined by reference to the latest available rate that was published on the relevant Bloomberg page.
Rfactor_t	means, in the event Observation Date (t) is an ex-dividend date of the Underlying Stock, an amount determined by the Calculation Agent, subject to the adjustments and provisions of the Conditions, according to the following formula: $Rfactor_t = 1 - \frac{Div_t}{S_{t-1}}$ <p>where</p> <p><i>Div_t</i> is the dividend to be paid out in respect of the Underlying Stock and the relevant ex-dividend date which shall be considered gross of any applicable withholding taxes.</p>
ACT(t-1,t)	ACT (t-1;t) means the number of calendar days between the Underlying Stock Business Day immediately preceding the Observation Date (such Underlying Stock Business Day being noted “t-1”) (included) and the Observation Date “t” (excluded).
DayCountBasis	365
Rate	
Benchmark Fallback	upon the occurrence or likely occurrence, as determined by the Calculation Agent, of a Reference Rate Event, the Calculation Agent may make adjustments as it may determine appropriate to account for the relevant event or circumstance, including but not limited to using any alternative rates from such date, with or without retroactive effect as the Calculation Agent may in its sole and absolute discretion determine.
Reference Rate Event	means, in respect of the Reference Rate any of the following has occurred or will occur: (i) a Reference Rate Cessation; (ii) an Administrator/Benchmark Event; or

(iii) a Reference Rate is, with respect to over-the-counter derivatives transactions which reference such Reference Rate, the subject of any market-wide development formally agreed upon by the International Swaps and Derivative Association (ISDA) or the Asia Securities Industry & Financial Markets Association (ASIFMA), pursuant to which such Reference Rate is, on a specified date, replaced with a risk-free rate (or near risk-free rate) established in order to comply with the recommendations in the Financial Stability Board's paper titled "Reforming Major Interest Rate Benchmarks" dated 22 July 2014.

**Reference Rate
Cessation**

means, for a Reference Rate, the occurrence of one or more of the following events:

(i) a public statement or publication of information by or on behalf of the administrator of the Reference Rate announcing that it has ceased or will cease to provide the Reference Rate permanently or indefinitely, provided that, at the time of the statement or publication, there is no successor administrator that will continue to provide the Reference Rate;

(ii) a public statement or publication of information by the regulatory supervisor for the administrator of the Reference Rate, the central bank for the currency of the Reference Rate, an insolvency official with jurisdiction over the administrator for the Reference Rate, a resolution authority with jurisdiction over the administrator for the Reference Rate or a court or an entity with similar insolvency or resolution authority over the administrator for the Reference Rate, which states that the administrator of the Reference Rate has ceased or will cease to provide the Reference Rate permanently or indefinitely, provided that, at the time of the statement or publication, there is no successor administrator that will continue to provide the Reference Rate; or

(iii) in respect of a Reference Rate, a public statement or publication of information by the regulatory supervisor for the administrator of such Reference Rate announcing that (a) the regulatory supervisor has determined that such Reference Rate is no longer, or as of a specified future date will no longer be, representative of the underlying market and economic reality that such Reference Rate is intended to measure and that representativeness will not be restored and (b) it is being made in the awareness that the statement or publication will engage certain contractual triggers for fallbacks activated by pre-cessation announcements by such supervisor (howsoever described) in contracts;

**Administrator/
Benchmark
Event**

means, for a Reference Rate, any authorisation, registration, recognition, endorsement, equivalence decision, approval or inclusion in any official register in respect of the Reference Rate or the administrator or sponsor of the Benchmark has not been, or will not be, obtained or has been, or will be, rejected, refused, suspended or withdrawn by the relevant competent authority or other relevant official body, in each case with the effect that either the Issuer, the Calculation Agent or any other entity is not, or will not be, permitted under any applicable law or regulation to use the Reference Rate to perform its or their respective obligations under the Certificates.

**Reference
Rate(s)**

means the rate(s) used in the Leverage Inverse Strategy Formula, for example SORA, SOFR and US Federal Funds Effective Rate.

Extraordinary Strategy Adjustment for Performance Reasons (“Air Bag Mechanism”)

Extraordinary Strategy Adjustment for Performance Reasons If the Calculation Agent determines that an Intraday Restrike Event has occurred during an Observation Date(t) (the **Intraday Restrike Date**, noted hereafter **IRD**), an adjustment (an **Extraordinary Strategy Adjustment for Performance Reasons**) shall take place during such Observation Date(t) in accordance with the following provisions.

(1) Provided the last Intraday Restrike Observation Period as of such Intraday Restrike Date does not end on the TimeReferenceClosing, the Leverage Inverse Strategy Closing Level on the Intraday Restrike Date (LSL_{IRD}) should be computed as follows:

$$LSL_{IRD} = \text{Max}[ILSL_{IR(n)} \times (1 + ILR_{IR(n),IR(C)} - IRC_{IR(n),IR(C)}), 0]$$

(2) If the last Intraday Restrike Event Observation Period on the relevant Intraday Restrike Date ends on the TimeReferenceClosing:

$$LSL_{IRD} = \text{Max}[ILSL_{IR(n)}, 0]$$

$ILSL_{IR(k)}$

means, in respect of $IR(k)$, the Intraday Leverage Inverse Strategy Level in accordance with the following provisions:

(1) for $k = 1$:

$$ILSL_{IR(1)} = \text{Max}[LSL_{IRD-1} \times (1 + ILR_{IR(0),IR(1)} - FC_{IRD-1,IRD} - SB_{IRD-1,IRD} - IRC_{IR(0),IR(1)}), 0]$$

(2) for $k > 1$:

$$ILSL_{IR(k)} = \text{Max}[ILSL_{IR(k-1)} \times (1 + ILR_{IR(k-1),IR(k)} - IRC_{IR(k-1),IR(k)}), 0]$$

$ILR_{IR(k-1),IR(k)}$

means the Intraday Leveraged Return between $IR(k-1)$ and $IR(k)$, calculated as follows:

$$ILR_{IR(k-1),IR(k)} = \text{Leverage} \times \left(\frac{IS_{IR(k)}}{IS_{IR(k-1)}} - 1 \right)$$

$IRC_{IR(k-1),IR(k)}$

means the Intraday Rebalancing Cost of the Leverage Inverse Strategy in respect of $IR(k)$ on a given Intraday Restrike Date, calculated as follows:

$$IRC_{IR(k-1),IR(k)} = \text{Leverage} \times (\text{Leverage} - 1) \times \left(\left| \frac{IS_{IR(k)}}{IS_{IR(k-1)}} - 1 \right| \right) \times TC$$

$IS_{IR(k)}$

means the Underlying Stock Price in respect of $IR(k)$ computed as follows:

(1) for $k=0$

$$IS_{IR(0)} = S_{IRD-1} \times Rfactor_{IRD}$$

(2) for $k=1$ to n

means in respect of $IR(k)$, the highest price of the Underlying Stock during the respective Intraday Restrike Observation Period

(3) with respect to $IR(C)$

$$IS_{IR(C)} = S_{IRD}$$

In each case, subject to the adjustments and provisions of the Conditions.

$IR(k)$

For $k=0$, means the scheduled close for the Relevant Stock Exchange for the

Underlying Stock (or any successor thereto) on the Observation Date immediately preceding the relevant Intraday Restrike Date;

For $k=1$ to n , means the k^{th} Intraday Restrike Event on the relevant Intraday Restrike Date.

IR(C) means the scheduled close for the Relevant Stock Exchange for the Underlying Stock (or any successor thereto) on the relevant Intraday Restrike Date.

n means the number of Intraday Restrike Events that occurred on the relevant Intraday Restrike Date.

Intraday Restrike Event means in respect of an Observation Date(t):
(1) provided no Intraday Restrike Event has previously occurred on such Observation Date (t), the increase at any Calculation Time of the Underlying Stock price by 20% or more compared with the relevant Underlying Stock Price $IS_{IR(0)}$ as of such Calculation Time.
(2) if k Intraday Restrike Events have occurred on the relevant Intraday Restrike Date, the increase at any Calculation Time of the Underlying Stock price by 20% or more compared with the relevant Underlying Stock Price $IS_{IR(k)}$ as of such Calculation Time.

Calculation Time means any time between the TimeReferenceOpening and the TimeReferenceClosing, provided that the relevant data is available to enable the Calculation Agent to determine the Leverage Inverse Strategy Level.

TimeReferenceOpening means the scheduled opening time for the Relevant Stock Exchange for the Underlying Stock (or any successor thereto).

TimeReferenceClosing means the scheduled closing time for the Relevant Stock Exchange for the Underlying Stock (or any successor thereto).

Intraday Restrike Event Observation Period means in respect of an Intraday Restrike Event, the period starting on and excluding the Intraday Restrike Event Time and finishing on and including the sooner between (1) the time falling 15 minutes of continuous trading after the Intraday Restrike Event Time and (2) the TimeReferenceClosing.

Where, during such period, the Calculation Agent determines that (1) the trading in the Underlying Stock is disrupted or subject to suspension or limitation or (2) the Relevant Stock Exchange for the Underlying Stock is not open for continuous trading, the Intraday Restrike Event Observation Period will be extended to the extent necessary until (1) the trading in the Underlying Stock is no longer disrupted, suspended or limited and (2) the Relevant Stock Exchange for the Underlying Stock is open for continuous trading.

Intraday Restrike Event Time means in respect of an Intraday Restrike Event, the Calculation Time on which such event occurs.

The Conditions set out in the section headed “Terms and Conditions of the European Style Cash Settled Long/Short Certificates on Single Equities” in the Base Listing Document are set out below. This section is qualified in its entirety by reference to the detailed information appearing elsewhere in this document which shall, to the extent so specified or to the extent inconsistent with the relevant Conditions set out below, replace or modify the relevant Conditions for the purpose of the Certificates.

TERMS AND CONDITIONS OF

THE EUROPEAN STYLE CASH SETTLED LONG/SHORT CERTIFICATES ON SINGLE EQUITIES

1. Form, Status and Guarantee, Transfer and Title

- (a) *Form.* The Certificates (which expression shall, unless the context otherwise requires, include any further certificates issued pursuant to Condition 11) are issued subject to and with the benefit of: -
- (i) a master instrument by way of deed poll (the “**Master Instrument**”) dated 14 June 2024, made by SG Issuer (the “**Issuer**”) and Société Générale (the “**Guarantor**”); and
 - (ii) a warrant agent agreement (the “**Master Warrant Agent Agreement**” or “**Warrant Agent Agreement**”) dated any time before or on the Closing Date, made between the Issuer and the Warrant Agent for the Certificates.

Copies of the Master Instrument and the Master Warrant Agent Agreement or Warrant Agent Agreement are available for inspection at the specified office of the Warrant Agent.

The holders of the Certificates (the “**Certificate Holders**”) are entitled to the benefit of, are bound by and are deemed to have notice of all the provisions of the Master Instrument and the Master Warrant Agent Agreement or Warrant Agent Agreement.

- (b) *Status and Guarantee.* The Certificates constitute direct, general and unsecured obligations of the Issuer and rank, and will rank, equally among themselves and *pari passu* with all other present and future unsecured and unsubordinated obligations of the Issuer (save for statutorily preferred exceptions). The Certificates provide for cash settlement on exercise. The Certificates do not entitle Certificate Holders to the delivery of any Underlying Stock, are not secured by the Underlying Stock and do not entitle Certificate Holders to any interest in any Underlying Stock.

The due and punctual payment of any amounts due by the Issuer in respect of the Certificates issued by the Issuer is unconditionally and irrevocably guaranteed by the Guarantor as provided in the Guarantee (each such amount payable under the Guarantee, a “**Guarantee Obligation**”).

The Guarantee Obligations will constitute direct, unconditional, unsecured and unsubordinated obligations of the Guarantor ranking as senior preferred obligations as provided for in Article L. 613-30-3 I 3° of the French Code *Monétaire et Financier* (the “**Code**”).

Such Guarantee Obligations rank and will rank equally and rateably without any preference or priority among themselves and:

- (i) *pari passu* with all other direct, unconditional, unsecured and unsubordinated obligations of the Guarantor outstanding as of the date of the entry into force of the law no. 2016-1691 (the “**Law**”) on 11 December 2016;
- (ii) *pari passu* with all other present or future direct, unconditional, unsecured and senior preferred obligations (as provided for in Article L. 613-30-3 I 3° of the Code) of the Guarantor issued after the date of the entry into force of the Law on 11 December 2016;
- (iii) junior to all present or future claims of the Guarantor benefiting from the statutorily preferred exceptions; and
- (iv) senior to all present and future senior non-preferred obligations (as provided for in Article L.613-30-3 I 4° of the Code) of the Guarantor.

In the event of the failure of the Issuer to promptly perform its obligations to any Certificate Holder under the terms of the Certificates, such Certificate Holder may, but is not obliged to, give written notice to the Guarantor at Société Générale, Tour Société Générale, 75886 Paris Cedex 18, France marked for the attention of SEGL/JUR/OMF - Market Transactions & Financing.

- (c) **Transfer.** The Certificates are represented by a global warrant certificate (“**Global Warrant**”) which will be deposited with The Central Depository (Pte) Limited (“**CDP**”). Certificates in definitive form will not be issued. Transfers of Certificates may be effected only in Board Lots or integral multiples thereof. All transactions in (including transfers of) Certificates, in the open market or otherwise, must be effected through a securities account with CDP. Title will pass upon registration of the transfer in the records maintained by CDP.
- (d) **Title.** Each person who is for the time being shown in the records maintained by CDP as entitled to a particular number of Certificates shall be treated by the Issuer, the Guarantor and the Warrant Agent as the holder and absolute owner of such number of Certificates, notwithstanding any notice to the contrary. The expression “**Certificate Holder**” shall be construed accordingly.
- (e) **Bail-In.** By the acquisition of Certificates, each Certificate Holder (which, for the purposes of this Condition, includes any current or future holder of a beneficial interest in the Certificates) acknowledges, accepts, consents and agrees:
 - (i) to be bound by the effect of the exercise of the Bail-In Power (as defined below) by the Relevant Resolution Authority (as defined below) on the Issuer’s liabilities under the Certificates, which may include and result in any of the following, or some combination thereof:
 - (A) the reduction of all, or a portion, of the Amounts Due (as defined below), on a permanent basis;
 - (B) the conversion of all, or a portion, of the Amounts Due into shares, other securities or other obligations of the Issuer or the Guarantor or another person (and the issue to the Certificate Holder of such shares, securities or obligations), including by means of an amendment, modification or variation of the Conditions of the Certificates, in which case the Certificate Holder agrees to accept in lieu of its rights under the Certificates any such shares, other

securities or other obligations of the Issuer or the Guarantor or another person;

- (C) the cancellation of the Certificates; and/or
- (D) the amendment or alteration of the expiration of the Certificates or amendment of the amounts payable on the Certificates, or the date on which the amounts become payable, including by suspending payment for a temporary period; and

that terms of the Certificates are subject to, and may be varied, if necessary, to give effect to the exercise of the Bail-In Power by the Relevant Resolution Authority or the regulator,

(the “**Statutory Bail-In**”);

- (ii) if the Relevant Resolution Authority exercises its Bail-In Power on liabilities of the Guarantor, pursuant to Article L.613-30-3-I-3 of the French Monetary and Financial Code (the “**Code**”):

- (A) ranking:
 - (1) junior to liabilities of the Guarantor benefitting from statutorily preferred exceptions pursuant to Article L.613-30-3-I 1° and 2 of the Code;
 - (2) *pari passu* with liabilities of the Guarantor as defined in Article L.613-30-3-I-3 of the Code; and
 - (3) senior to liabilities of the Guarantor as defined in Article L.613-30-3-I-4 of the Code; and
- (B) which are not *titres non structurés* as defined under Article R.613-28 of the Code, and
- (C) which are not or are no longer eligible to be taken into account for the purposes of the MREL (as defined below) ratio of the Guarantor

and such exercise of the Bail-In Power results in the write-down or cancellation of all, or a portion of, the principal amount of, or the outstanding amount payable in respect of, and/or interest on, such liabilities, and/or the conversion of all, or a portion, of the principal amount of, or the outstanding amount payable in respect of, or interest on, such liabilities into shares or other securities or other obligations of the Guarantor or another person, including by means of variation to their terms and conditions in order to give effect to such exercise of Bail-In Power, then the Issuer’s obligations under the Certificates will be limited to (i) payment of the amount as reduced or cancelled that would be recoverable by the Certificate Holders and/or (ii) the delivery or the payment of value of the shares or other securities or other obligations of the Guarantor or another person that would be paid or delivered to the Certificate Holders as if, in either case, the Certificates had been directly issued by the Guarantor itself and any Amount Due under the Certificates had accordingly been directly subject to the exercise of the Bail-In Power (the “**Contractual Bail-in**”).

No repayment or payment of the Amounts Due will become due and payable or be paid after the exercise of the Statutory Bail-In with respect to the Issuer or the Guarantor unless, at the time such repayment or payment, respectively, is scheduled to become due, such repayment or payment would be permitted to be made by the Issuer or the Guarantor under the applicable laws and regulations in effect in France or Luxembourg and the European Union applicable to the Issuer or the Guarantor or other members of its group.

No repayment or payment of the Amounts Due will become due and payable or be paid under the Certificates issued by SG Issuer after implementation of the Contractual Bail-in.

Upon the exercise of the Statutory Bail-in or upon implementation of the Contractual Bail-in with respect to the Certificates, the Issuer or the Guarantor will provide a written notice to the Certificate Holders in accordance with Condition 9 as soon as practicable regarding such exercise of the Statutory Bail-in or implementation of the Contractual Bail-in. Any delay or failure by the Issuer or the Guarantor to give notice shall not affect the validity and enforceability of the Statutory Bail-in or Contractual Bail-in nor the effects on the Certificates described above.

Neither a cancellation of the Certificates, a reduction, in part or in full, of the Amounts Due, the conversion thereof into another security or obligation of the Issuer or the Guarantor or another person, as a result of the exercise of the Statutory Bail-in or the implementation of the Contractual Bail-in with respect to the Certificates will be an event of default or otherwise constitute non-performance of a contractual obligation, or entitle the Certificate Holder to any remedies (including equitable remedies) which are hereby expressly waived.

The matters set forth in this Condition shall be exhaustive on the foregoing matters to the exclusion of any other agreements, arrangements or understandings between the Issuer, the Guarantor and each Certificate Holder. No expenses necessary for the procedures under this Condition, including, but not limited to, those incurred by the Issuer and the Guarantor, shall be borne by any Certificate Holder.

For the purposes of this Condition:

“Amounts Due” means any amounts due by the Issuer under the Certificates.

“Bail-In Power” means any statutory cancellation, write-down and/or conversion power existing from time to time under any laws, regulations, rules or requirements relating to the resolution of banks, banking group companies, credit institutions and/or investment firms, including but not limited to any such laws, regulations, rules or requirements that are implemented, adopted or enacted within the context of a European Union directive or regulation of the European Parliament and of the Council establishing a framework for the recovery and resolution of credit institutions and investment firms, or any other applicable laws or regulations, as amended, or otherwise, pursuant to which obligations of a bank, banking group company, credit institution or investment firm or any of its affiliates can be reduced, cancelled, varied or otherwise modified in any way and/or converted into shares or other securities or obligations of the obligor or any other person.

“MREL” means the Minimum Requirement for own funds and Eligible Liabilities as defined in Directive 2014/59/EU of the European Parliament and of the Council of 15

May 2014 establishing a framework for the recovery and resolution of credit institutions and investment firms (as amended from time to time).

“**Relevant Resolution Authority**” means any authority with the ability to exercise the Bail-in Power on Societe Generale or SG Issuer as the case may be.

2. Certificate Rights and Exercise Expenses

- (a) *Certificate Rights.* Every Certificate entitles each Certificate Holder, upon due exercise and on compliance with Condition 4, to payment by the Issuer of the Cash Settlement Amount (as defined below) (if any) in the manner set out in Condition 4.

The “**Cash Settlement Amount**”, in respect of each Certificate, shall be an amount payable in the Settlement Currency equal to the Closing Level multiplied by the Notional Amount per Certificate.

The “**Closing Level**”, in respect of each Certificate, shall be an amount payable in the Settlement Currency equal to:

$$\left(\frac{\text{Final Reference Level} \times \text{Final Exchange Rate}}{\text{Initial Reference Level} \times \text{Initial Exchange Rate}} - \text{Strike Level} \right) \times \text{Hedging Fee Factor}$$

If the Issuer determines, in its sole discretion, that on the Valuation Date or any Observation Date a Market Disruption Event has occurred, then that Valuation Date or Observation Date shall be postponed until the first succeeding Exchange Business Day or Underlying Stock Business Day, as the case may be, on which there is no Market Disruption Event, unless there is a Market Disruption Event on each of the five Exchange Business Days or Underlying Stock Business Days, as the case may be, immediately following the original date that, but for the Market Disruption Event, would have been a Valuation Date or an Observation Date. In that case: -

- (i) that fifth Exchange Business Day or Underlying Stock Business Day, as the case may be, shall be deemed to be the Valuation Date or the Observation Date notwithstanding the Market Disruption Event; and
- (ii) the Issuer shall determine the Final Reference Level or the relevant closing level on the basis of its good faith estimate of the Final Reference Level or the relevant closing level that would have prevailed on that fifth Exchange Business Day or Underlying Stock Business Day, as the case may be, but for the Market Disruption Event.

“**Market Disruption Event**” means the occurrence or existence of (i) any suspension of trading on the Relevant Stock Exchange of the Underlying Stock requested by the Company if that suspension is, in the determination of the Issuer, material, (ii) any suspension of or limitation imposed on trading (including but not limited to unforeseen circumstances such as by reason of movements in price exceeding limits permitted by the Relevant Stock Exchange or any act of God, war, riot, public disorder, explosion, terrorism or otherwise) on the Relevant Stock Exchange in the Underlying Stock if that suspension or limitation is, in the determination of the Issuer, material, or (iii) the closing of the Relevant Stock Exchange or a disruption to trading on the Relevant Stock Exchange if that disruption is, in the determination of the Issuer, material as a result of the occurrence of any act of God, war, riot, public disorder, explosion or terrorism.

- (b) *Exercise Expenses.* Certificate Holders will be required to pay all charges which are incurred in respect of the exercise of the Certificates (the “**Exercise Expenses**”). An

amount equivalent to the Exercise Expenses will be deducted by the Issuer from the Cash Settlement Amount in accordance with Condition 4. Notwithstanding the foregoing, the Certificate Holders shall account to the Issuer on demand for any Exercise Expenses to the extent that they were not or could not be deducted from the Cash Settlement Amount prior to the date of payment of the Cash Settlement Amount to the Certificate Holders in accordance with Condition 4.

- (c) **No Rights.** The purchase of Certificates does not confer on the Certificate Holders any right (whether in respect of voting, dividend or other distributions in respect of the Underlying Stock or otherwise) which the holder of an Underlying Stock may have.

3. Expiry Date

Unless automatically exercised in accordance with Condition 4(b), the Certificates shall be deemed to expire at 10:00 a.m. (Singapore time) on the Expiry Date or if the Expiry Date is not a Business Day (as defined below), the immediately preceding Business Day.

4. Exercise of Certificates

- (a) **Exercise.** Certificates may only be exercised on the Expiry Date or if the Expiry Date is not a Business Day, the immediately preceding Business Day, in accordance with Condition 4(b).
- (b) **Automatic Exercise.** Certificate Holders shall not be required to deliver an exercise notice. Exercise of Certificates shall be determined by whether the Cash Settlement Amount (less any Exercise Expenses) is positive. If the Cash Settlement Amount (less any Exercise Expenses) is positive, all Certificates shall be deemed to have been automatically exercised at 10:00 a.m. (Singapore time) on the Expiry Date or if the Expiry Date is not a Business Day, the immediately preceding Business Day. The Cash Settlement Amount less the Exercise Expenses in respect of the Certificates shall be paid in the manner set out in Condition 4(c) below. In the event the Cash Settlement Amount (less any Exercise Expenses) is zero, all Certificates shall be deemed to have expired at 10:00 a.m. (Singapore time) on the Expiry Date or if the Expiry Date is not a Business Day, the immediately preceding Business Day, and Certificate Holders shall not be entitled to receive any payment from the Issuer in respect of the Certificates.
- (c) **Settlement.** In respect of Certificates which are automatically exercised in accordance with Condition 4(b), the Issuer will pay to the relevant Certificate Holder the Cash Settlement Amount (if any) in the Settlement Currency. The aggregate Cash Settlement Amount (less any Exercise Expenses) shall be despatched as soon as practicable and no later than five Settlement Business Days (as defined in the relevant Supplemental Listing Document and subject to extension upon the occurrence of a Settlement Disruption Event (as defined below)) following the Expiry Date by way of crossed cheque or other payment in immediately available funds drawn in favour of the Certificate Holder only (or, in the case of joint Certificate Holders, the first-named Certificate Holder) appearing in the records maintained by CDP. Any payment made pursuant to this Condition 4(c) shall be delivered at the risk and expense of the Certificate Holder and posted to the Certificate Holder's address appearing in the records maintained by CDP (or, in the case of joint Certificate Holders, to the address of the first-named Certificate Holder appearing in the records maintained by CDP). If the Cash Settlement Amount is equal to or less than the determined Exercise Expenses, no amount is payable.

If the Issuer determines, in its sole discretion, that on any Settlement Business Day during the period of five Settlement Business Days following the Expiry Date a Settlement Disruption Event has occurred, such Settlement Business Day shall be postponed to the next Settlement Business Day on which the Issuer determines that the Settlement Disruption Event is no longer subsisting and such period shall be extended accordingly, provided that the Issuer and/or the Guarantor shall make their best endeavours to implement remedies as soon as reasonably practicable to eliminate the impact of the Settlement Disruption Event on its/their payment obligations under the Certificates and/or the Guarantee.

“Settlement Disruption Event” means the occurrence or existence of any malicious action or attempt initiated to steal, expose, alter, disable or destroy information through unauthorised access to, or maintenance or use of, the Computer Systems of the Issuer, the Guarantor, the Calculation Agent, their respective affiliates (the “SG Group”), their IT service providers, by (and without limitation) the use of malware, ransomware, phishing, denial or disruption of service or cryptojacking or any unauthorized entry, removal, reproduction, transmission, deletion, disclosure or modification preventing the Issuer, the Guarantor and/or the Calculation Agent to perform their obligations under the Certificates, and notwithstanding the implementation of processes, required, as the case may be, by the laws and regulations applicable to the Issuer, the Guarantor, the Calculation Agent and their affiliates, or their IT service providers to improve their resilience to these actions and attempts.

“Computer System” means all the computer resources including, in particular: hardware, software packages, software, databases and peripherals, equipment, networks, electronic installations for storing computer data, including Data. The Computer System shall be understood to be that which (i) belongs to the SG Group and/or (ii) is rented, operated or legally held by the SG Group under a contract with the holder of the rights to the said system and/or (iii) is operated on behalf of the SG Group by a third party within the scope of a contractual relationship and/or (iv) is made available to the SG Group under a contract within the framework of a shared system (in particular cloud computing).

“Data” means any digital information, stored or used by the Computer System, including confidential data.

- (d) *CDP not liable.* CDP shall not be liable to any Certificate Holder with respect to any action taken or omitted to be taken by the Issuer or the Warrant Agent in connection with the exercise of the Certificates or otherwise pursuant to or in connection with these Conditions.
- (e) *Business Day.* In these Conditions, a **“Business Day”** shall be a day on which the SGX-ST is open for dealings in Singapore during its normal trading hours and banks are open for business in Singapore.

5. Warrant Agent

- (a) *Warrant Agent.* The Issuer reserves the right, subject to the appointment of a successor, at any time to vary or terminate the appointment of the Warrant Agent and to appoint another Warrant Agent provided that it will at all times maintain a Warrant Agent which, so long as the Certificates are listed on the SGX-ST, shall be in Singapore. Notice of any such termination or appointment and of any change in the

specified office of the Warrant Agent will be given to the Certificate Holders in accordance with Condition 9.

- (b) *Agent of Issuer.* The Warrant Agent will be acting as agent of the Issuer and will not assume any obligation or duty to or any relationship of agency or trust for the Certificate Holders. All determinations and calculations by the Warrant Agent under these Conditions shall (save in the case of manifest error) be final and binding on the Issuer and the Certificate Holders.

6. Adjustments

- (a) *Potential Adjustment Event.* Following the declaration by a Company of the terms of any Potential Adjustment Event (as defined below), the Issuer will determine whether such Potential Adjustment Event has a dilutive or concentrative or other effect on the theoretical value of the Underlying Stock and, if so, will (i) make the corresponding adjustment, if any, to any one or more of the Conditions as the Issuer determines appropriate to account for that dilutive or concentrative or other effect, and (ii) determine the effective date of that adjustment. The Issuer may, but need not, determine the appropriate adjustment by reference to the adjustment in respect of such Potential Adjustment Event made by an exchange on which options or futures contracts on the Underlying Stock are traded.

- (b) *Definitions.* “**Potential Adjustment Event**” means any of the following:

- (i) a subdivision, consolidation, reclassification or other restructuring of the Underlying Stock (excluding a Merger Event) or a free distribution or dividend of any such Underlying Stock to existing holders by way of bonus, capitalisation or similar issue;
- (ii) a distribution or dividend to existing holders of the Underlying Stock of (1) such Underlying Stock, or (2) other share capital or securities granting the right to payment of dividends and/or the proceeds of liquidation of the Company equally or proportionately with such payments to holders of such Underlying Stock, or (3) share capital or other securities of another issuer acquired by the Company as a result of a “spin-off” or other similar transaction, or (4) any other type of securities, rights or warrants or other assets, in any case for payment (in cash or otherwise) at less than the prevailing market price as determined by the Issuer;
- (iii) an extraordinary dividend;
- (iv) a call by the Company in respect of the Underlying Stock that is not fully paid;
- (v) a repurchase by the Company of the Underlying Stock whether out of profits or capital and whether the consideration for such repurchase is cash, securities or otherwise;
- (vi) with respect to a Company an event that results in any shareholder rights pursuant to a shareholder rights agreement or other plan or arrangement of the type commonly referred to as a “poison pill” being distributed, or becoming separated from shares of common stock or other shares of the capital stock of such Company (provided that any adjustment effected as a result of such an event shall be readjusted upon any redemption of such rights); or

- (vii) any other event that may have, in the opinion of the Issuer, a dilutive or concentrative or other effect on the theoretical value of the Underlying Stock.
- (c) *Merger Event, Tender Offer, Nationalisation and Insolvency.* If a Merger Event, Tender Offer, Nationalisation or Insolvency occurs in relation to the Underlying Stock, the Issuer may take any action described below:
- (i) determine the appropriate adjustment, if any, to be made to any one or more of the Conditions to account for the Merger Event, Tender Offer, Nationalisation or Insolvency, as the case may be, and determine the effective date of that adjustment. The Issuer may, but need not, determine the appropriate adjustment by reference to the adjustment in respect of the Merger Event, Tender Offer, Nationalisation or Insolvency made by an options exchange to options on the Underlying Stock traded on that options exchange;
 - (ii) cancel the Certificates by giving notice to the Certificate Holders in accordance with Condition 9. If the Certificates are so cancelled, the Issuer will pay an amount to each Certificate Holder in respect of each Certificate held by such Certificate Holder which amount shall be the fair market value of a Certificate taking into account the Merger Event, Tender Offer, Nationalisation or Insolvency, as the case may be, less the cost to the Issuer and/or any of its affiliates of unwinding any underlying related hedging arrangements, all as determined by the Issuer in its reasonable discretion. Payment will be made in such manner as shall be notified to the Certificate Holders in accordance with Condition 9; or
 - (iii) following any adjustment to the settlement terms of options on the Underlying Stock on such exchange(s) or trading system(s) or quotation system(s) as the Issuer in its reasonable discretion shall select (the “**Option Reference Source**”) make a corresponding adjustment to any one or more of the Conditions, which adjustment will be effective as of the date determined by the Issuer to be the effective date of the corresponding adjustment made by the Option Reference Source. If options on the Underlying Stock are not traded on the Option Reference Source, the Issuer will make such adjustment, if any, to any one or more of the Conditions as the Issuer determines appropriate, with reference to the rules and precedents (if any) set by the Option Reference Source, to account for the Merger Event, Tender Offer, Nationalisation or Insolvency, as the case may be, that in the determination of the Issuer would have given rise to an adjustment by the Option Reference Source if such options were so traded.

Once the Issuer determines that its proposed course of action in connection with a Merger Event, Tender Offer, Nationalisation or Insolvency, it shall give notice to the Certificate Holders in accordance with Condition 9 stating the occurrence of the Merger Event, Tender Offer, Nationalisation or Insolvency, as the case may be, giving details thereof and the action proposed to be taken in relation thereto. Certificate Holders should be aware that due to the nature of such events, the Issuer will not make an immediate determination of its proposed course of action or adjustment upon the announcement or occurrence of a Merger Event, Tender Offer, Nationalisation or Insolvency.

- (d) *Definitions.* “**Insolvency**” means that by reason of the voluntary or involuntary liquidation, bankruptcy, insolvency, dissolution or winding-up of or any analogous proceeding affecting a Company (i) all the Underlying Stock of that Company is required to be transferred to a trustee, liquidator or other similar official or (ii) holders of the Underlying Stock of that Company become legally prohibited from transferring them. “**Merger Date**” means the closing date of a Merger Event or, where a closing date cannot be determined under the local law applicable to such Merger Event, such other date as determined by the Issuer. “**Merger Event**” means, in respect of the Underlying Stock, any (i) reclassification or change of such Underlying Stock that results in a transfer of or an irrevocable commitment to transfer all of such Underlying Stock outstanding to another entity or person, (ii) consolidation, amalgamation, merger or binding share exchange of a Company with or into another entity or person (other than a consolidation, amalgamation, merger or binding share exchange in which such Company is the continuing entity and which does not result in reclassification or change of all of such Underlying Stock outstanding), (iii) takeover offer, exchange offer, solicitation, proposal or other event by any entity or person to purchase or otherwise obtain 100 per cent. of the outstanding Underlying Stock of the Company that results in a transfer of or an irrevocable commitment to transfer all such Underlying Stock (other than such Underlying Stock owned or controlled by such other entity or person), or (iv) consolidation, amalgamation, merger or binding share exchange of the Company or its subsidiaries with or into another entity in which the Company is the continuing entity and which does not result in a reclassification or change of all such Underlying Stock outstanding but results in the outstanding Underlying Stock (other than Underlying Stock owned or controlled by such other entity) immediately prior to such event collectively representing less than 50 per cent. of the outstanding Underlying Stock immediately following such event, in each case if the Merger Date is on or before the Valuation Date. “**Nationalisation**” means that all the Underlying Stock or all or substantially all of the assets of a Company are nationalised, expropriated or are otherwise required to be transferred to any governmental agency, authority, entity or instrumentality thereof. “**Tender Offer**” means a takeover offer, tender offer, exchange offer, solicitation, proposal or other event by any entity or person that results in such entity or person purchasing, or otherwise obtaining or having the right to obtain, by conversion or other means, greater than 10 per cent. and less than 100 per cent. of the outstanding voting shares of the Company, as determined by the Issuer, based upon the making of filings with governmental or self-regulatory agencies or such other information as the Issuer deems relevant.
- (e) *Subdivision or Consolidation of the Certificates.* The Issuer reserves the right to subdivide or consolidate the Certificates, provided that such adjustment is considered by the Issuer not to be materially prejudicial to the Certificate Holders generally (without considering the circumstances of any individual Certificate Holder or the tax or other consequences of such adjustment or amendment in any particular jurisdiction) and subject to the approval of the SGX-ST.
- (f) *Other Adjustments.* Except as provided in this Condition 6 and Conditions 10 and 12, adjustments will not be made in any other circumstances, subject to the right reserved by the Issuer (such right to be exercised in the Issuer's sole discretion and without any obligation whatsoever) to make such adjustments and amendments as it believes appropriate in circumstances where an event or events occur which it

believes in its sole discretion (and notwithstanding any prior adjustment made pursuant to the above) should, in the context of the issue of the Certificates and the obligations of the Issuer, give rise to such adjustment or, as the case may be, amendment provided that such adjustment or, as the case may be, amendment is considered by the Issuer not to be materially prejudicial to the Certificate Holders generally (without considering the circumstances of any individual Certificate Holder or the tax or other consequences of such adjustment or amendment in any particular jurisdiction).

- (g) *Notice of Adjustments.* All determinations made by the Issuer pursuant hereto will be conclusive and binding on the Certificate Holders. The Issuer will give, or procure that there is given, notice as soon as practicable of any adjustment and of the date from which such adjustment is effective by publication in accordance with Condition 9. For the avoidance of doubt, no notice will be given if the Issuer determines that adjustments will not be made.

6A. US withholding tax implications on the Payment

Notwithstanding any other provision of these Conditions, in no event will the Issuer or the Guarantor be required to pay any additional amounts in respect of the Certificates for, or on account of, any withholding or deduction (i) required pursuant to an agreement described in Section 1471(b) of the U.S. Internal Revenue Code of 1986, as amended (the “**US Code**”), or otherwise imposed pursuant to Sections 1471 through 1474 of the US Code, any regulations or agreements thereunder, or any official interpretations thereof, or any law implementing an intergovernmental approach thereto, (ii) imposed pursuant to the Section 871(m) Regulations (“**Section 871(m) Withholding**”) or (iii) imposed by any other law of the United States. In addition, in determining the amount of Section 871(m) Withholding imposed on any payments on the Certificates, the Issuer shall be entitled to withhold on any “dividend equivalent” (as defined for purposes of Section 871(m) of the US Code) at the highest rate applicable to such payments regardless of any exemption from, or reduction in, such withholding otherwise available under applicable law.

With respect to Specified Warrants that provide for net dividend reinvestment in respect of either an underlying U.S. security (i.e. a security that pays U.S. source dividends) or an index that includes U.S. securities, all payments on Certificates that reference such U.S. securities or an index that includes U.S. securities may be calculated by reference to dividends on such U.S. securities that are reinvested at a rate of 70%. In such case, in calculating the relevant payment amount, the holder will be deemed to receive, and the Issuer or the Guarantor will be deemed to withhold, 30% of any dividend equivalent payments (as defined in Section 871(m) of the Code) in respect of the relevant U.S. securities. The Issuer or the Guarantor will not pay any additional amounts to the holder on account of the Section 871(m) amount deemed withheld.

For the purpose of this Condition:

“**Section 871(m) Regulations**” means the U.S. Treasury regulations issued under Section 871(m) of the Code.

“**Specified Warrants**” means, subject to special rules from 2017 through 2026 set out in Notice 2024-44 (the **Notice**), Warrants issued on or after 1 January 2017 that substantially replicate the economic performance of one or more U.S. underlying equities as determined by the Issuer on the date for such Warrants as of which the expected delta of the product is determined by the Issuer, based on tests set out in the applicable Section 871(m) Regulations, such that the Warrants are subject to withholding under the Section 871(m) Regulations.

7. Purchases

The Issuer, the Guarantor or any of their respective subsidiaries may at any time purchase Certificates at any price in the open market or by tender or by private treaty. Any Certificates so purchased may be held or resold or surrendered for cancellation.

8. Meetings of Certificate Holders; Modification

- (a) *Meetings of Certificate Holders.* The Master Warrant Agent Agreement or Warrant Agent Agreement contains provisions for convening meetings of the Certificate Holders to consider any matter affecting their interests, including the sanctioning by Extraordinary Resolution (as defined in the Master Warrant Agent Agreement or Warrant Agent Agreement) of a modification of the provisions of the Certificates or of the Master Warrant Agent Agreement or Warrant Agent Agreement.

At least 21 days' notice (exclusive of the day on which the notice is given and of the day on which the meeting is held) specifying the date, time and place of the meeting shall be given to the Certificate Holders.

Such a meeting may be convened by the Issuer or by Certificate Holders holding not less than ten per cent. of the Certificates for the time being remaining unexercised. The quorum at any such meeting for passing an Extraordinary Resolution will be two or more persons holding or representing not less than 25 per cent. of the Certificates for the time being remaining unexercised, or at any adjourned meeting, two or more persons being or representing Certificate Holders whatever the number of Certificates so held or represented.

A resolution will be an Extraordinary Resolution when it has been passed at a duly convened meeting by not less than three-quarters of the votes cast by such Certificate Holders who, being entitled to do so, vote in person or by proxy.

An Extraordinary Resolution passed at any meeting of the Certificate Holders shall be binding on all the Certificate Holders whether or not they are present at the meeting. Resolutions can be passed in writing if passed unanimously.

- (b) *Modification.* The Issuer may, without the consent of the Certificate Holders, effect (i) any modification of the provisions of the Certificates or the Master Instrument which is not materially prejudicial to the interests of the Certificate Holders or (ii) any modification of the provisions of the Certificates or the Master Instrument which is of a formal, minor or technical nature, which is made to correct an obvious error or which is necessary in order to comply with mandatory provisions of Singapore law. Any such modification shall be binding on the Certificate Holders and shall be notified to them by the Warrant Agent before the date such modification becomes effective or as soon as practicable thereafter in accordance with Condition 9.

9. Notices

- (a) *Documents.* All cheques and other documents required or permitted by these Conditions to be sent to a Certificate Holder or to which a Certificate Holder is entitled or which the Issuer shall have agreed to deliver to a Certificate Holder may be delivered by hand or sent by post addressed to the Certificate Holder at his address appearing in the records maintained by CDP or, in the case of joint Certificate Holders, addressed to the joint holder first named at his address appearing in the records maintained by CDP, and airmail post shall be used if that address is not in

Singapore. All documents delivered or sent in accordance with this paragraph shall be delivered or sent at the risk of the relevant Certificate Holder.

- (b) *Notices.* All notices to Certificate Holders will be validly given if published in English on the web-site of the SGX-ST. Such notices shall be deemed to have been given on the date of the first such publication. If publication on the web-site of the SGX-ST is not practicable, notice will be given in such other manner as the Issuer may determine. The Issuer shall, at least one month prior to the expiry of any Certificate, give notice of the date of expiry of such Certificate in the manner prescribed above.

10. Liquidation

In the event of a liquidation or dissolution of the Company or the appointment of a liquidator (including a provisional liquidator) or receiver or judicial manager or trustee or administrator or analogous person under Singapore or other applicable law in respect of the whole or substantially the whole of its undertaking, property or assets, all unexercised Certificates will lapse and shall cease to be valid for any purpose, in the case of voluntary liquidation, on the effective date of the relevant resolution and, in the case of an involuntary liquidation or dissolution, on the date of the relevant court order or, in the case of the appointment of a liquidator (including a provisional liquidator) or receiver or judicial manager or trustee or administrator or analogous person under Singapore or other applicable law in respect of the whole or substantially the whole of its undertaking, property or assets, on the date when such appointment is effective but subject (in any such case) to any contrary mandatory requirement of law. In the event of the voluntary liquidation of the Company, the Issuer shall make such adjustments or amendments as it reasonably believes are appropriate in the circumstances.

11. Further Issues

The Issuer shall be at liberty from time to time, without the consent of the Certificate Holders, to create and issue further certificates so as to form a single series with the Certificates, subject to the approval of the SGX-ST.

12. Delisting

- (a) *Delisting.* If at any time, the Underlying Stock ceases to be listed on the Relevant Stock Exchange, the Issuer shall give effect to these Conditions in such manner and make such adjustments and amendments to the rights attaching to the Certificates as it shall, in its absolute discretion, consider appropriate to ensure, so far as it is reasonably able to do so, that the interests of the Certificate Holders generally are not materially prejudiced as a consequence of such delisting (without considering the individual circumstances of any Certificate Holder or the tax or other consequences that may result in any particular jurisdiction).
- (b) *Issuer's Determination.* The Issuer shall determine, in its absolute discretion, any adjustment or amendment and its determination shall be conclusive and binding on the Certificate Holders save in the case of manifest error. Notice of any adjustments or amendments shall be given to the Certificate Holders in accordance with Condition 9 as soon as practicable after they are determined.

13. Early Termination

- (a) *Early Termination for Illegality and Force Majeure, etc.* If the Issuer determines that a Regulatory Event (as defined below) has occurred and, for reasons beyond its control, the performance of its obligations under the Certificates has become illegal or impractical in whole or in part for any reason, or the Issuer determines that, for

reasons beyond its control, it is no longer legal or practical for it to maintain its hedging arrangements with respect to the Certificates for any reason, the Issuer may in its discretion and without obligation terminate the Certificates early in accordance with Condition 13(e).

Should any one or more of the provisions contained in the Conditions be or become invalid, the validity of the remaining provisions shall not in any way be affected thereby.

For the purposes of this Condition:

“Regulatory Event” means, following the occurrence of a Change in Law (as defined below) with respect to the Issuer and/or Société Générale as Guarantor or in any other capacity (including without limitation as hedging counterparty of the Issuer, market maker of the Certificates or direct or indirect shareholder or sponsor of the Issuer) or any of its affiliates involved in the issuer of the Certificates (hereafter the **“Relevant Affiliates”** and each of the Issuer, Société Générale and the Relevant Affiliates, a **“Relevant Entity”**) that, after the Certificates have been issued, (i) any Relevant Entity would incur a materially increased (as compared with circumstances existing prior to such event) amount of tax, duty, liability, penalty, expense, fee, cost or regulatory capital charge however defined or collateral requirements for performing its obligations under the Certificates or hedging the Issuer’s obligations under the Certificates, including, without limitation, due to clearing requirements of, or the absence of, clearing of the transactions entered into in connection with the issue of, or hedging the Issuer’s obligation under, the Certificates, (ii) it is or will become for any Relevant Entity impracticable, impossible (in each case, after using commercially reasonable efforts), unlawful, illegal or otherwise prohibited or contrary, in whole or in part, under any law, regulation, rule, judgement, order or directive of any governmental, administrative or judicial authority, or power, applicable to such Relevant Entity (a) to hold, acquire, issue, reissue, substitute, maintain, settle, or as the case may be, guarantee, the Certificates, (b) to acquire, hold, sponsor or dispose of any asset(s) (or any interest thereof) of any other transaction(s) such Relevant Entity may use in connection with the issue of the Certificates or to hedge the Issuer’s obligations under the Certificates, (c) to perform obligations in connection with, the Certificates or any contractual arrangement entered into between the Issuer and Société Générale or any Relevant Affiliate (including without limitation to hedge the Issuer’s obligations under the Certificates) or (d) to hold, acquire, maintain, increase, substitute or redeem all or a substantial part of its direct or indirect shareholding in the Issuer’s capital or the capital of any Relevant Affiliate or to directly or indirectly sponsor the Issuer or any Relevant Affiliate, or (iii) there is or may be a material adverse effect on a Relevant Entity in connection with the issue of the Certificates.

“Change in law” means (i) the adoption, enactment, promulgation, execution or ratification of any applicable new law, regulation or rule (including, without limitation, any applicable tax law, regulation or rule) after the Certificates have been issued, (ii) the implementation or application of any applicable law, regulation or rule (including, without limitation, any applicable tax law, regulation or rule) already in force when the Certificates have been issued but in respect of which the manner of its implementation or application was not known or unclear at the time, or (iii) the change of any applicable law, regulation or rule existing when the Certificates are issued, or the change in the interpretation or application or practice relating thereto,

existing when the Certificates are issued of any applicable law, regulation or rule, by any competent court, tribunal, regulatory authority or any other entity exercising executive, legislative, judicial, taxing, regulatory or administrative powers or functions of or pertaining to government (including any additional or alternative court, tribunal, authority or entity, to that existing when the Certificates are issued).

- (b) *Early Termination for Holding Limit Event.* The Issuer may in its discretion and without obligation terminate the Certificates early in accordance with Condition 13(e) where a Holding Limit Event (as defined below) occurs.

For the purposes of this Condition:

“**Holding Limit Event**” means, assuming the investor is the Issuer and/or any of its affiliates, the Issuer together with its affiliates, in aggregate hold, an interest in the Underlying Stock, constituting or likely to constitute (directly or indirectly) ownership, control or the power to vote a percentage of any class of voting securities of the Underlying Stock, of the Underlying Stock in excess of a percentage permitted or advisable, as determined by the Issuer, for the purpose of its compliance with the Bank Holding Company Act of 1956 as amended by Section 619 of the Dodd-Frank Wall Street Reform and Consumer Protection Act (the Volcker Rule), including any requests, regulations, rules, guidelines or directives made by the relevant governmental authority under, or issued by the relevant governmental authority in connection with, such statutes.

- (c) *Early Termination for Hedging Disruption.* If the Issuer or any of its affiliates is, following commercially reasonable efforts, not in the position (i) to enter, re-enter, replace, maintain, liquidate, acquire or dispose of any Hedge Positions (as defined below) or (ii) to freely realize, recover, receive, repatriate, remit, regain or transfer the proceeds of any Hedge Position (where either (i) or (ii) shall constitute a “**Hedging Disruption**”), the Issuer may terminate the Certificates early in accordance with Condition 13(e) provided that the intrinsic value on the previous trading day of the relevant Certificate is at or above the Issue Price. The Issuer’s decision on whether a Hedging Disruption has occurred is final and conclusive. For the avoidance of doubt, Hedging Disruptions shall include the scenario where any Hedge Position cannot be maintained up to the amount necessary to cover all of the Issuer’s obligations under the Certificates.

For the purposes hereof, “**Hedge Positions**” means any one or more commercially reasonable (i) positions (including long or short positions) or contracts in, or relating to, securities, options, futures, other derivatives contracts or foreign exchange, (ii) stock loan or borrowing transactions or (iii) other instruments, contracts, transactions or arrangements (howsoever described) that the Issuer or any of its affiliates determines necessary to hedge, individually or on a portfolio basis, any risk (including, without limitation, market risk, price risk, foreign exchange risk and interest rate risk) in relation to the assumption and fulfilment of the Issuer’s obligations under the Certificates.

- (d) *Early Termination for other reasons.* The Issuer reserves the right (such right to be exercised in the Issuer’s sole and unfettered discretion and without any obligation whatsoever) to terminate the Certificates in accordance with Condition 13(e) where an event or events occur which it believes in its sole discretion should, in the context of the issue of the Certificates and the obligations of the Issuer, give rise to such

termination provided that such termination (i) is considered by the Issuer not to be materially prejudicial to the interests of Certificate Holders generally (without considering the circumstances of any individual Certificate Holder or the tax or other consequences of such termination in any particular jurisdiction); or (ii) is otherwise considered by the Issuer to be appropriate and such termination is approved by the SGX-ST.

- (e) *Termination.* If the Issuer terminates the Certificates early, the Issuer will give notice to the Certificate Holders in accordance with Condition 9. The Issuer will, if and to the extent permitted by applicable law, pay an amount to each Certificate Holder in respect of each Certificate held by such holder equal to the fair market value of a Certificate notwithstanding such illegality, impracticality or the relevant event less the cost to the Issuer of unwinding any underlying related hedging arrangements, all as determined by the Issuer in its sole and absolute discretion. The determination of the fair market value may deviate from the determination of the Cash Settlement Amount under different scenarios, including but not limited to, where (i) the Daily Reset (as defined in the relevant Supplemental Listing Document) mechanism is suspended and/or (ii) the Final Reference Level is determined based on the closing price of the Underlying Stock on multiple Underlying Stock Business Days or Exchange Business Days, as the case may be. Payment will be made in such manner as shall be notified to the Certificate Holders in accordance with Condition 9.

14. Substitution of the Issuer

The Issuer may be replaced by the Guarantor or any subsidiary of the Guarantor as principal obligor in respect of the Certificates without the consent of the relevant Certificate Holders. If the Issuer determines that it shall be replaced by the Guarantor or any subsidiary of the Guarantor (the “**Substituted Obligor**”), it shall give at least 90 days’ notice (exclusive of the day on which the notice is given and of the day on which the substitution is effected) specifying the date of the substitution, in accordance with Condition 9, to the Certificate Holders of such event and, immediately on the expiry of such notice, the Substituted Obligor shall become the principal obligor in place of the Issuer and the Certificate Holders shall thereupon cease to have any rights or claims whatsoever against the Issuer.

Upon any such substitution, all references to the Issuer in the Conditions and all agreements relating to the Certificates will be to the Substituted Obligor and the Certificates will be modified as required, and the Certificate Holders will be notified of the modified terms and conditions of such Certificates in accordance with Condition 9.

For the purposes of this Condition, it is expressly agreed that by subscribing to, acquiring or otherwise purchasing or holding the Certificates, the Certificate Holders are expressly deemed to have consented to the substitution of the Issuer by the Substituted Obligor and to the release of the Issuer from any and all obligations in respect of the Certificates and all agreements relating thereto and are expressly deemed to have accepted such substitution and the consequences thereof.

15. Governing Law

The Certificates, the Master Instrument and the Master Warrant Agent Agreement or Warrant Agent Agreement will be governed by and construed in accordance with Singapore law. The Issuer and the Guarantor and each Certificate Holder (by its purchase of the Certificates) shall be deemed to have submitted for all purposes in connection with the Certificates, the Master Instrument and the Master Warrant Agent Agreement or Warrant Agent Agreement to the non-exclusive jurisdiction of the

courts of Singapore. The Guarantee shall be governed by and construed in accordance with Singapore law.

16. Prescription

Claims against the Issuer for payment of any amount in respect of the Certificates will become void unless made within six years of the Expiry Date and, thereafter, any sums payable in respect of such Certificates shall be forfeited and shall revert to the Issuer.

17. Contracts (Rights of Third Parties) Act 2001 of Singapore

Unless otherwise provided in the Global Warrant, the Master Instrument and the Master Warrant Agent Agreement or Warrant Agent Agreement, a person who is not a party to any contracts made pursuant to the Global Warrant, the Master Instrument and the Master Warrant Agent Agreement or Warrant Agent Agreement has no rights under the Contracts (Rights of Third Parties) Act 2001 of Singapore to enforce any terms of such contracts. Except as expressly provided herein, the consent of any third party is not required for any subsequent agreement by the parties hereto to amend or vary (including any release or compromise of any liability) or terminate such contracts.

SUMMARY OF THE ISSUE

The following is a summary of the issue and should be read in conjunction with, and is qualified by reference to, the other information set out in this document and the Base Listing Document. Terms used in this Summary are defined in the Conditions.

Issuer:	SG Issuer
Company:	Alphabet Inc.
The Certificates:	European Style Cash Settled Short Certificates relating to the Underlying Stock
Number:	2,700,000 Certificates
Form:	The Certificates will be issued subject to, and with the benefit of, a master instrument by way of deed poll dated 14 June 2024 (the “ Master Instrument ”) and executed by the Issuer and the Guarantor and a master warrant agent agreement dated 29 May 2017 (the “ Master Warrant Agent Agreement ”) and made between the Issuer, the Guarantor and the Warrant Agent (as amended and/or supplemented from time to time).
Cash Settlement Amount:	In respect of each Certificate, is the amount (if positive) equal to: Notional Amount per Certificate x Closing Level
Denominations:	Certificates are represented by a global warrant in respect of all the Certificates.
Exercise:	The Certificates may only be exercised on the Expiry Date or if the Expiry Date is not a Business Day, the immediately preceding Business Day, in a Board Lot or integral multiples thereof. Certificate Holders will not be required to deliver an exercise notice. If the Cash Settlement Amount (less any Exercise Expenses) is positive, all Certificates will be deemed to have been automatically exercised at 10:00 a.m. (Singapore time) on the Expiry Date or if the Expiry Date is not a Business Day, the immediately preceding Business Day. The Cash Settlement Amount less the Exercise Expenses in respect of the Certificates shall be paid in the manner set out in Condition 4(c) of the Conditions. In the event the Cash Settlement Amount (less any Exercise Expenses) is zero, all Certificates shall be deemed to have expired at 10:00 a.m. (Singapore time) on the Expiry Date or if the Expiry Date is not a Business Day, the immediately preceding Business Day, and Certificate Holders shall not be entitled to receive any payment from the Issuer in respect of the Certificates.
Exercise and Trading Currency:	SGD
Board Lot:	100 Certificates

- Transfers of Certificates:** Certificates may only be transferred in Board Lots (or integral multiples thereof). All transfers in Certificates, in the open market or otherwise, must be effected through a securities account with CDP. Title will pass upon registration of the transfer in the records of CDP.
- Listing:** Application has been made to the SGX-ST for permission to deal in and for quotation of the Certificates and the SGX-ST has agreed in principle to grant permission to deal in and for quotation of the Certificates. Issue of the Certificates is conditional on such listing being granted. It is expected that dealings in the Certificates on the SGX-ST will commence on or about 8 October 2024.
- Governing Law:** The laws of Singapore
- Warrant Agent:** The Central Depository (Pte) Limited
4 Shenton Way
#02-01 SGX Centre 2
Singapore 068807
- Further Issues:** Further issues which will form a single series with the Certificates will be permitted, subject to the approval of the SGX-ST.

The above summary is qualified in its entirety by reference to the detailed information appearing elsewhere in this document and the Base Listing Document.

INFORMATION RELATING TO THE EUROPEAN STYLE CASH SETTLED SHORT CERTIFICATES ON SINGLE EQUITIES

What are European Style Cash Settled Short Certificates on Single Equities?

European style cash settled short certificates on single equities (the “**Certificates**”) are structured products relating to the Underlying Stock and the return on a Certificate is linked to the performance of the Leverage Inverse Strategy.

A) Cash Settlement Amount Payable upon the Exercise of the Certificates at Expiry

Upon the exercise of the Certificates at expiry, the Certificate Holders would be paid a Cash Settlement Amount in respect of each Certificate.

The Cash Settlement Amount, in respect of each Certificate, shall be an amount payable in the Settlement Currency equal to the Closing Level multiplied by the Notional Amount per Certificate.

The Closing Level, in respect of each Certificate, shall be an amount payable in the Settlement Currency equal to (1) divided by (2) less (3) subject to any adjustments such as (4), where:

- (1) is the Final Reference Level multiplied by the Final Exchange Rate;
- (2) is the Initial Reference Level multiplied by the Initial Exchange Rate;
- (3) is the Strike Level; and
- (4) is the Hedging Fee Factor.

If the Cash Settlement Amount (less any Exercise Expenses) is positive, all Certificates shall be deemed to have been automatically exercised and investors will receive a Cash Settlement Amount. If the Cash Settlement Amount (less any Exercise Expenses) is zero, all Certificates shall be deemed to have expired. Please refer to the section headed “Terms and Conditions of the European Style Cash Settled Long/Short Certificates on Single Equities” for further details on the calculation of the Cash Settlement Amount.

The Certificates are only suitable for investors who believe that the price of the Underlying Stock will fall and are seeking short-term leveraged inverse exposure to the Underlying Stock.

B) Trading the Certificates before Expiry

If the Certificate Holders want to cash out their investments in the Certificates before the expiry of the Certificates, they may sell the Certificates in the secondary market during the life of the Certificates, and would be subject to the following fees and charges:

- (i) For Certificate Holders who trade the Certificates intraday: shall pay normal transaction and brokerage fees for the trading of the Certificates on the SGX-ST, and may be required to pay stamp taxes or other documentary charges in accordance with the laws and practices of the country where the Certificates are transferred; and
- (ii) For Certificate Holders who hold the Certificates beyond market close of the SGX-ST: in addition to the normal transaction and brokerage fees and applicable stamp taxes, would also be required to bear the Management Fee and Gap Premium as well as certain costs embedded within the Leverage Inverse Strategy including the Stock Borrowing Cost and Rebalancing Cost. Due to the difference in trading hours of the SGX-ST and the Relevant Stock Exchange for the Underlying Stock, unless investors exit their position within the same SGX-ST trading day, they would bear the annualised costs.

Illustration of the Calculation of Hedging Fee Factor

Hedging Fee Factor	=	Product of the Daily Fees
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Daily Fees	=	Daily Management Fee Adjustment
		$1 - \text{Management Fee} \times \text{ACT} (t-1;t) / 360$
		x
		Daily Gap Premium Adjustment
		$1 - \text{Gap Premium} (t-1) \times \text{ACT} (t-1;t) / 360$

Illustration of the Calculation of Cash Settlement Amount

Cash Settlement Amount = Final Value of Certificates – Strike Level (zero)

Value of Certificates	=	$t^6=0$	x	$t=1$	x	$t=2$	x ...	$t=i$			
		Notional Amount		Leverage Inverse Strategy daily performance ⁷		Daily Fees		Leverage Inverse Strategy daily performance	Daily Fees	Leverage Inverse Strategy Daily performance	Daily Fees

Value of Certificates	=	$t=0$	x	Product of the daily Leverage Inverse Strategy Performance	x	Product of the Daily Fees (Hedging Fee Factor)		
		Notional Amount		Leverage Inverse Strategy daily performance		Leverage Inverse Strategy daily performance	Daily Fees	Daily Fees

Final Value of Certificates	=	$t=0$	x	Final Reference Level x Final Exchange Rate	÷	Initial Reference Level x Initial Exchange Rate	x	Hedging Fee Factor
		Notional Amount						

Illustration of the applicable fees and charges for an intraday trading scenario

Hedging Fee is implemented overnight in the price of the Certificate. As a consequence, when trading intraday within SGX-ST trading hours, investors will not bear any Hedging Fee.

Investors will only support bid/ask costs, which are the difference between the price at which the Designated Market Maker purchases (bid) and sells (ask) the Certificate at any point of time.

⁶ "t" refers to "Observation Date" which means each Underlying Stock Business Day (subject to Market Disruption Event) from (and including) the Underlying Stock Business Day immediately preceding the Expected Listing Date to the Valuation Date on which no Market Disruption Event occurs.

⁷ Leverage Inverse Strategy daily performance is computed as the Leverage Inverse Strategy Closing Level on Business Day (t) divided by the Leverage Inverse Strategy Closing Level on Business Day (t-1).

Example of Calculation of Hedging Fee Factor and Cash Settlement Amount

The example is purely hypothetical. We include the example to illustrate how the Certificates work, and you MUST NOT rely on them as any indication of the actual return or what the payout on the Certificates might actually be. The example also assumes a product which expires 16 days after listing date, to illustrate the daily calculation of price, costs and fees from listing date to expiry date.

Assuming an investor purchases the following Certificates at the Issue Price:

Underlying Stock:	Class A Common Stock of Alphabet Inc.
Expected Listing Date:	03/07/2018
Expiry Date:	18/07/2018
Initial Reference Level:	1,000
Initial Exchange Rate:	1
Final Reference Level:	1,200
Final Exchange Rate:	1
Issue Price:	4.00 SGD
Notional Amount per Certificate:	4.00 SGD
Management Fee (p.a.):	0.40%
Gap Premium (p.a.):	12.00%
Strike Level:	Zero

Hedging Fee Factor

Hedging Fee Factor on the n^{th} Underlying Stock Business Day after issuance of Certificate ("HFF (n)") is calculated as follows:

$$\text{HFF}(0) = 100\%$$

On Next Calendar Day (assuming it is an Underlying Stock Business Day):

$$\text{HFF}(1) = \text{HFF}(0) \times \left(1 - \text{Management Fee} \times \frac{\text{ACT}(t-1; t)}{360}\right) \times \left(1 - \text{Gap Premium} \times \frac{\text{ACT}(t-1; t)}{360}\right)$$

$$\text{HFF}(1) = 100\% \times \left(1 - 0.40\% \times \frac{1}{360}\right) \times \left(1 - 12.00\% \times \frac{1}{360}\right)$$

$$\text{HFF}(1) = 100\% \times 99.9989\% \times 99.9667\% \approx 99.9656\%$$

Assuming 2nd Underlying Stock Business Day falls 3 Calendar Days after 1st Underlying Stock Business Day:

$$\text{HFF (2)} = \text{HFF (1)} \times \left(1 - \text{Management Fee} \times \frac{\text{ACT}(t-1;t)}{360}\right) \times \left(1 - \text{Gap Premium} \times \frac{\text{ACT}(t-1;t)}{360}\right)$$

$$\text{HFF (2)} = 99.9656\% \times \left(1 - 0.40\% \times \frac{3}{360}\right) \times \left(1 - 12.00\% \times \frac{3}{360}\right)$$

$$\text{HFF (2)} = 99.9656\% \times 99.9967\% \times 99.9000\% \approx 99.8623\%$$

The same principle applies to the following Underlying Stock Business Days:

$$\text{HFF (n)} = \text{HFF (n-1)} \times \left(1 - \text{Management Fee} \times \frac{\text{ACT}(t-1;t)}{360}\right) \times \left(1 - \text{Gap Premium} \times \frac{\text{ACT}(t-1;t)}{360}\right)$$

In this example, the Hedging Fee Factor as of the Valuation Date would be equal to 99.4845% as illustrated below:

Date	HFF
03/07/2018	100.0000%
04/07/2018	99.9656%
05/07/2018	99.9311%
06/07/2018	99.8967%
09/07/2018	99.7935%
10/07/2018	99.7591%
11/07/2018	99.7247%
12/07/2018	99.6904%
13/07/2018	99.6561%
16/07/2018	99.5531%
17/07/2018	99.5188%
18/07/2018	99.4845%

Cash Settlement Amount

In this example, the Closing Level and the Cash Settlement Amount would be computed as follows:

$$\text{Closing Level} = [(\text{Final Reference Level} \times \text{Final Exchange Rate}) / (\text{Initial Reference Level} \times \text{Initial Exchange Rate}) - \text{Strike Level}] \times \text{Hedging Fee Factor}$$

$$= [(1200 \times 1) / (1000 \times 1) - 0] \times 99.4845\%$$

$$= 119.38\%$$

$$\text{Cash Settlement Amount} = \text{Closing Level} \times \text{Notional Amount per Certificate}$$

$$= 119.38\% \times 4.00 \text{ SGD}$$

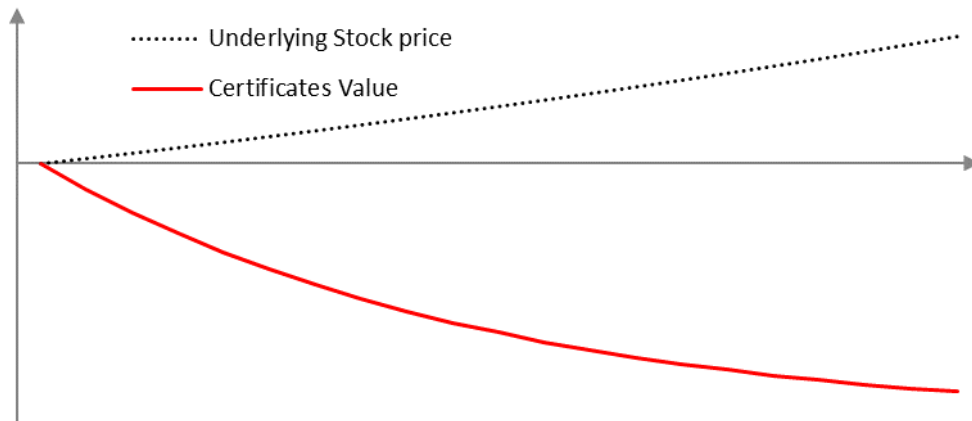
$$= 4.775 \text{ SGD}$$

Illustration on how returns and losses can occur under different scenarios

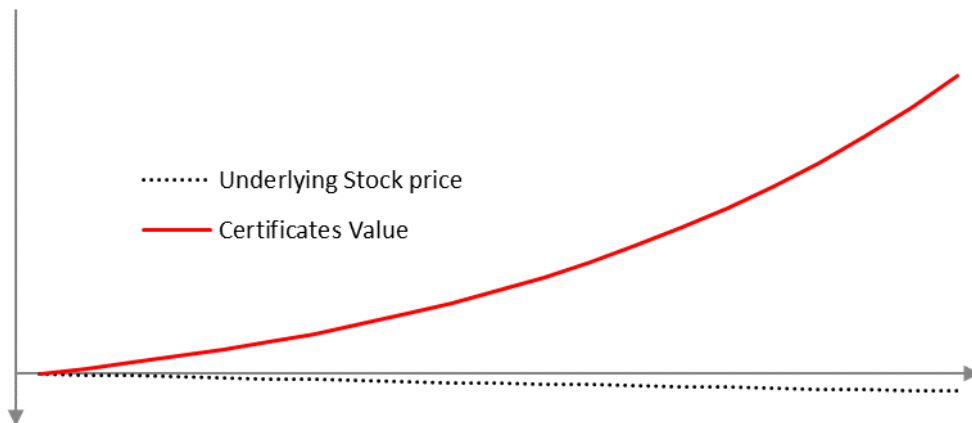
The examples are purely hypothetical and do not take fees and charges payable by investors into consideration. The examples highlight the effect of the Underlying Stock performance on the value of the Certificates and do not take into account the possible influence of fees or any other market parameters.

1. Illustrative examples

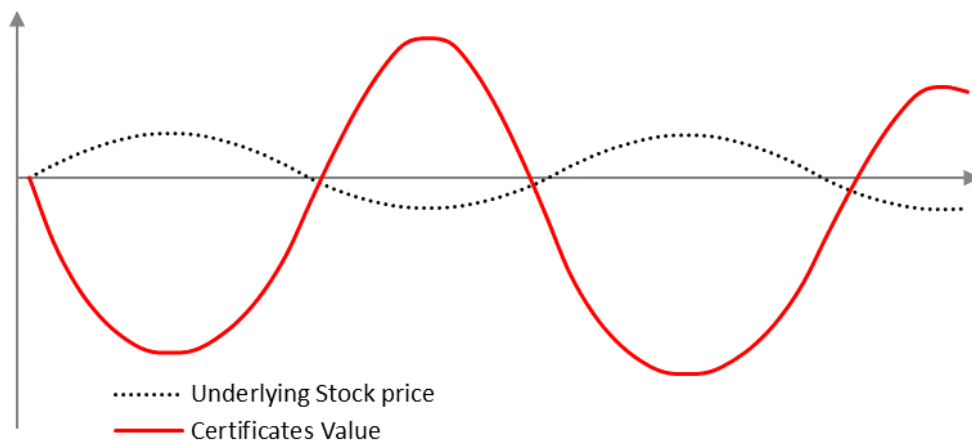
Scenario 1 – Upward Trend (during US trading hours)



Scenario 2 – Downward Trend (during US trading hours)



Scenario 3 – Volatile Market (during US trading hours)



2. Numerical Examples

Scenario 1 – Upward Trend

Underlying Stock						
	Day 0	Day 1	Day 2	Day 3	Day 4	Day 5
Daily return		2.0%	2.0%	2.0%	2.0%	2.0%
Value at end of US trading day	10,000.0	10,200.0	10,404.0	10,612.1	10,824.3	11,040.8
Accumulated Return	0.00%	2.00%	4.04%	6.12%	8.24%	10.41%

Value of the Certificates						
	Day 0	Day 1	Day 2	Day 3	Day 4	Day 5
Daily return		-6.0%	-6.0%	-6.0%	-6.0%	-6.0%
Value at end of US trading day	4.00	3.76	3.53	3.32	3.12	2.94
Accumulated Return	0.00%	-6.00%	-11.64%	-16.94%	-21.93%	-26.61%

Scenario 2 – Downward Trend

Underlying Stock						
	Day 0	Day 1	Day 2	Day 3	Day 4	Day 5
Daily return		-2.0%	-2.0%	-2.0%	-2.0%	-2.0%
Value at end of US trading day	10,000.0	9,800.0	9,604.0	9,411.9	9,223.7	9,039.2
Accumulated Return	0.00%	-2.00%	-3.96%	-5.88%	-7.76%	-9.61%

Value of the Certificates						
	Day 0	Day 1	Day 2	Day 3	Day 4	Day 5
Daily return		6.0%	6.0%	6.0%	6.0%	6.0%
Value at end of US trading day	4.00	4.24	4.49	4.76	5.05	5.35
Accumulated Return	0.00%	6.00%	12.36%	19.10%	26.25%	33.82%

Scenario 3 – Volatile Market

Underlying Stock						
	Day 0	Day 1	Day 2	Day 3	Day 4	Day 5
Daily return		2.0%	-2.0%	2.0%	-2.0%	2.0%
Value at end of US trading day	10,000.0	10,200.0	9,996.0	10,195.9	9,992.0	10,191.8
Accumulated Return	0.00%	2.00%	-0.04%	1.96%	-0.08%	1.92%

Value of the Certificates						
	Day 0	Day 1	Day 2	Day 3	Day 4	Day 5
Daily return		-6.0%	6.0%	-6.0%	6.0%	-6.0%
Value at end of US trading day	4.00	3.76	3.99	3.75	3.97	3.73
Accumulated Return	0.00%	-6.00%	-0.36%	-6.34%	-0.72%	-6.68%

Description of Air Bag Mechanism

The Certificates integrate an “Air Bag Mechanism” which is designed to reduce exposure to the Underlying Stock during extreme market conditions.

When the Air Bag triggers, the following events occur:

- **Observation Period:** the price of the Underlying Stock is observed and its maximum price is recorded (i) during 15 minutes of continuous trading after the Air Bag is triggered, or (ii) until Market Close if there is less than 15 minutes of continuous trading until Market Close when the Air Bag Mechanism is triggered; and thereafter
- **Reset Period:** the Leverage Inverse Strategy is reset using the maximum price of the Underlying Stock during the Observation Period as the New Observed Price. The New Observed Price replaces the last closing price of the Underlying Stock in order to compute the performance of the Leverage Inverse Strategy after the reset.

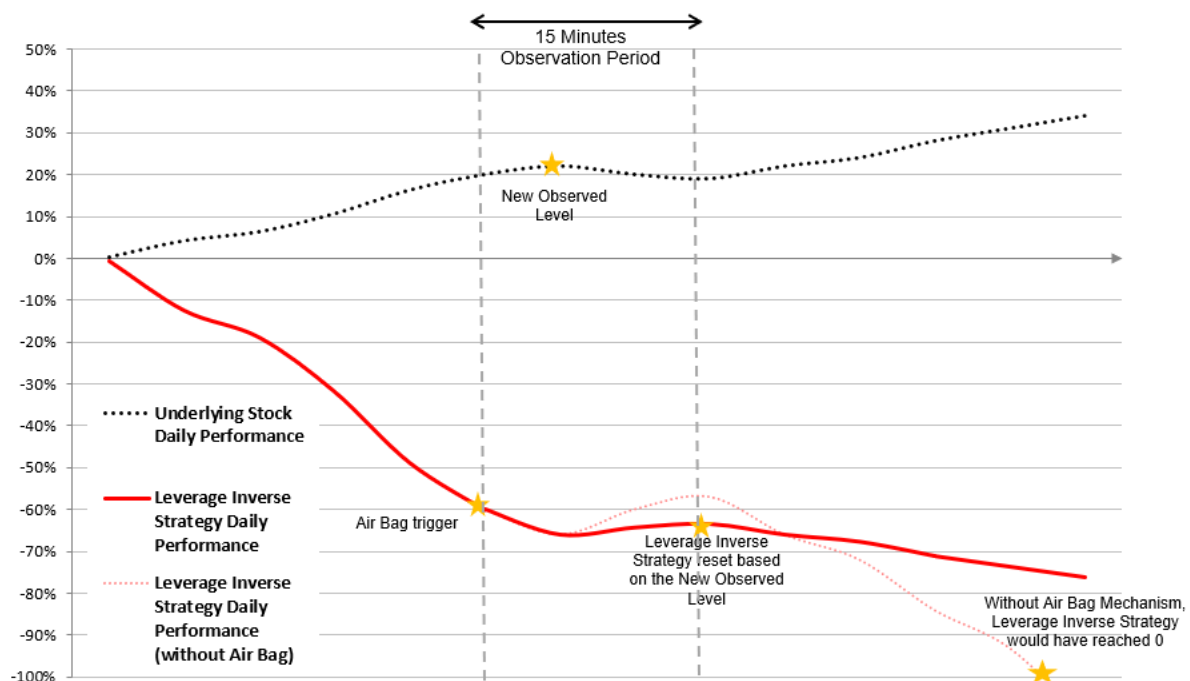
With **Market Close** defined as:

- the Underlying Stock closing time with respect to the Observation Period

The performance of the Leverage Inverse Strategy will be the inverse of the Underlying Stock.

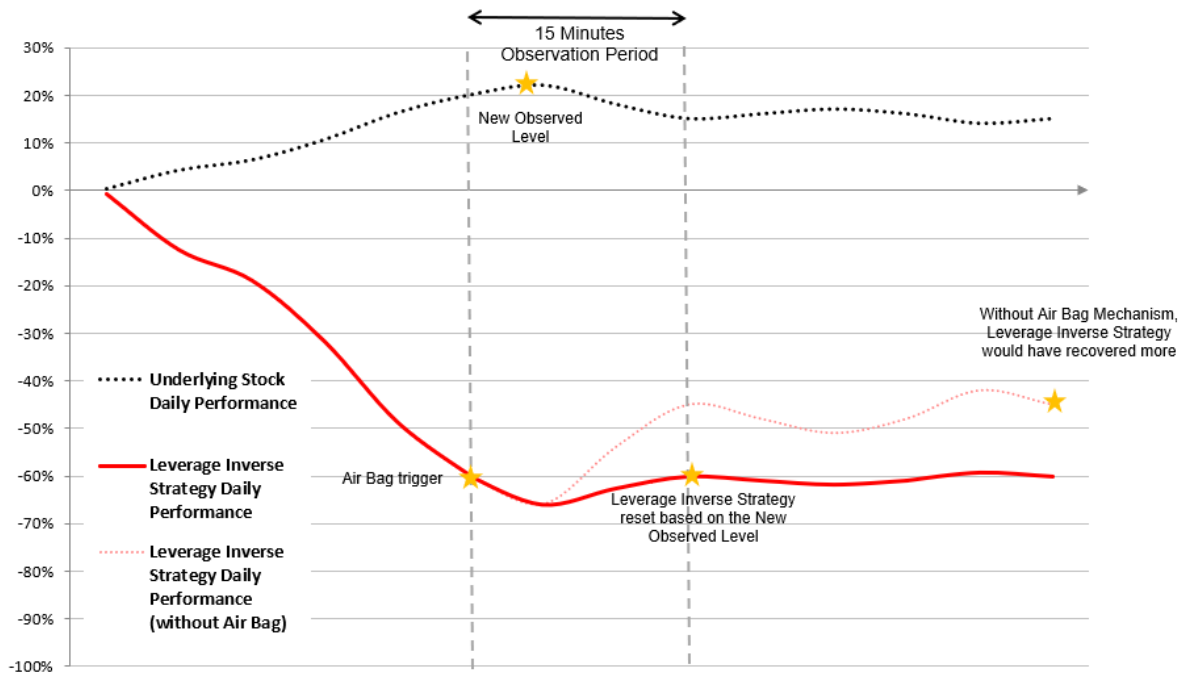
Illustrative examples of the Air Bag Mechanism⁸

Scenario 1 – Upward Trend after Air Bag trigger (during US trading hours)

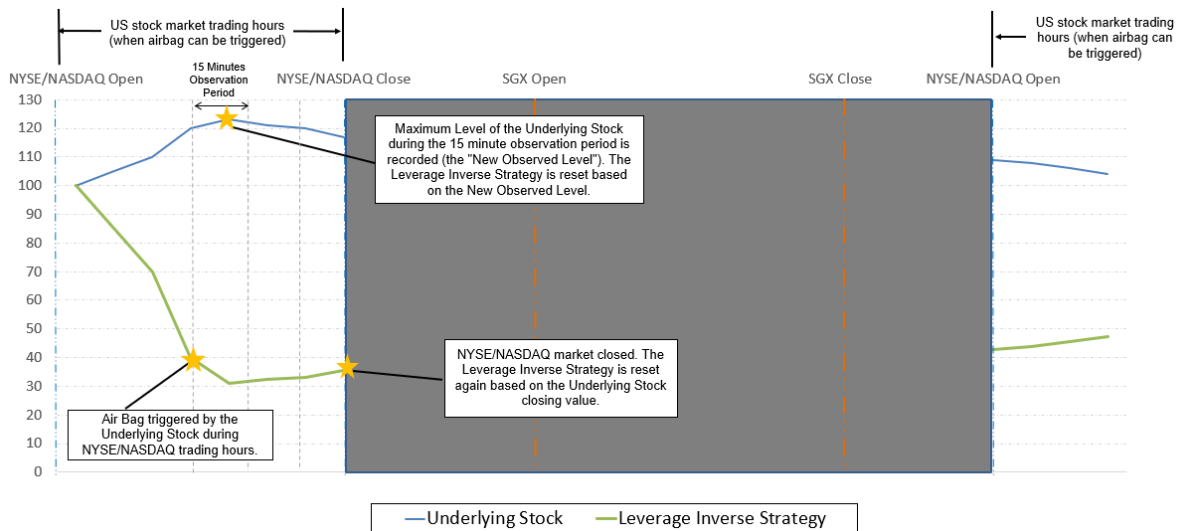


⁸ The illustrative examples are not exhaustive. The illustrative examples above are designed to illustrate the impact of the Air Bag Mechanism on the assumption that there will be a residual value in the Certificates following the Air Bag triggers. Please refer to “Scenarios where the investor may lose the entire value of the investment” on pages 54 to 55 on hypothetical scenarios when investors may lose their entire value of the investment.

Scenario 2 – Downward Trend after Air Bag trigger (during US trading hours)



- The Air Bag Mechanism can only be triggered during trading hours of the Relevant Stock Exchange for the Underlying Stock

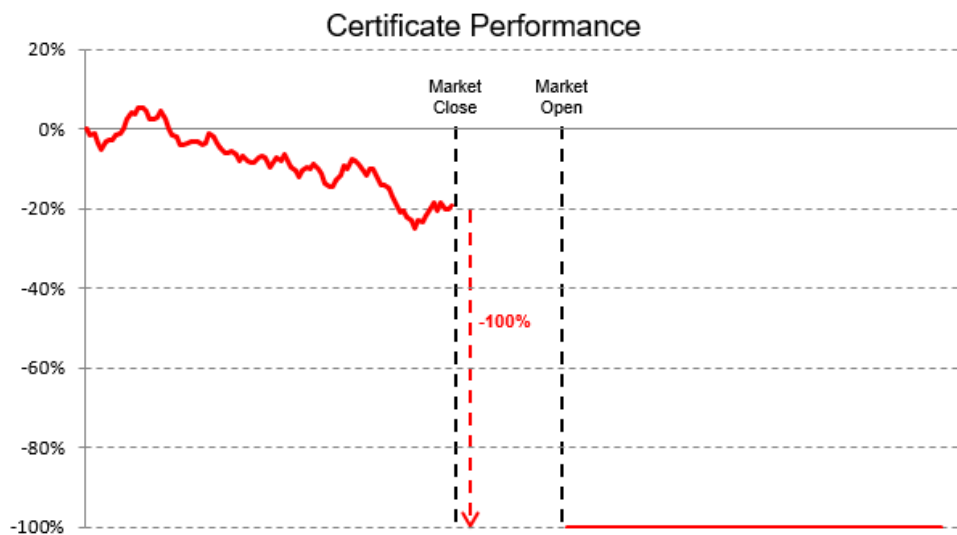
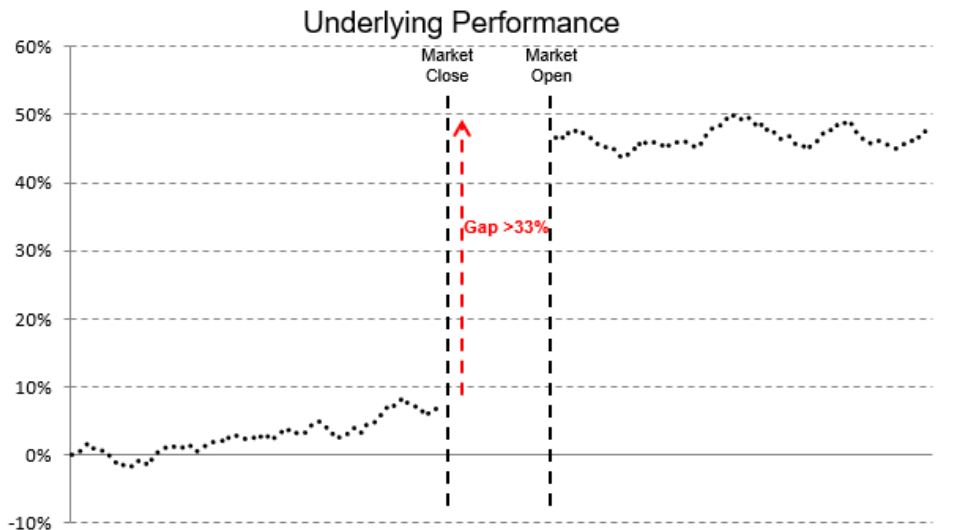


Scenarios where the investor may lose the entire value of the investment

The scenarios below are purely hypothetical and do not take fees and charges payable by investors into consideration. The scenarios highlight cases where the Certificates may lose 100% of their value.

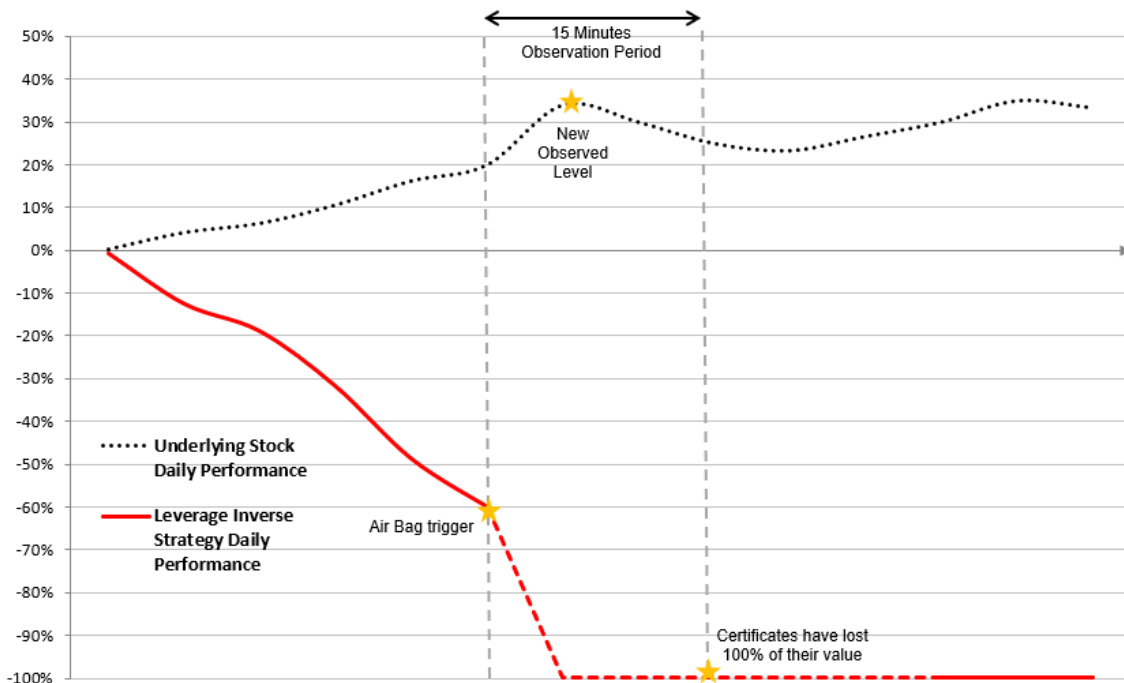
Scenario 1 – Rise of the Underlying Stock outside of US trading hours

On any Underlying Stock Business Day, the opening price of the Underlying Stock may be higher or lower than the closing price on the previous trading day of the Relevant Stock Exchange for the Underlying Stock. The difference between the previous closing price and the opening price of the Underlying Stock is termed a “gap”. If the opening price of the Underlying Stock is approximately 33% or more above the closing price on the previous trading day of the Relevant Stock Exchange for the Underlying Stock, the Air Bag Mechanism may only be triggered during the trading hours of the Relevant Stock Exchange for the Underlying Stock, and the Certificates would lose their entire value in such event. In such case, as the Certificates became valueless during the US trading hours, at subsequent SGX-ST open, the DMM may not provide any quotation on the Certificates and the Issuer may apply to suspend trading of the Certificates.



Scenario 2 – Sharp intraday rise of the Underlying Stock during US trading hours

Although the Air Bag Mechanism is designed to reduce the exposure to the Underlying Stock during extreme market conditions, the Certificates can lose 100% of their value in the event the price of the Underlying Stock rises by approximately 33% or more within the 15 minutes Observation Period compared to the reference price, being: (i) if air bag has not been previously triggered on the same day, the previous closing price of the Underlying Stock, or (ii) if one or more air bag have been previously triggered on the same day, the latest New Observed Price. The Certificates would lose their entire value in such event. In such case, as the Certificates became valueless during the US trading hours, at subsequent SGX-ST open, the DMM may not provide any quotation on the Certificates and the Issuer may apply to suspend trading of the Certificates.



Examples and illustrations of adjustments due to certain corporate actions

The examples are purely hypothetical and do not take fees and charges payable by investors into consideration. The examples highlight the effect of corporate actions on the value of the Certificates and do not take into account the possible influence of fees, exchange rates, or any other market parameters.

In the case of any corporate action on the Underlying Stock, the Calculation Agent will, as soon as reasonably practical after it becomes aware of such event, determine whether such corporate action has a dilutive or concentrative effect on the theoretical value of the Underlying Stock, and if so, will (a) calculate the corresponding adjustment, if any, to be made to the elements relating to the Underlying Stock which are used to determine any settlement or payment terms under the Certificates and/or adjust at its discretion any other terms of the Certificates as it determines appropriate to preserve the economic equivalent of the obligations of the Issuer under the Certificates and (b) determine the effective date of such adjustment.

Notwithstanding the foregoing, in the event Observation Date (t) is an ex-date with respect to a corporate action related to the Underlying Stock, the Calculation Agent may, in its sole and absolute discretion, replace the $Rfactor_t$ with respect to such Observation Date (t) by an amount computed according to the following generic formula:

$$Rfactor_t = \left[1 - \frac{Div_t + DivExc_t - M \times R}{S_{t-1}} \right] \times \frac{1}{1 + M}$$

This formula is provided for indicative purposes and the Calculation Agent may determine that this formula is not appropriate for certain corporate actions and may apply a different formula instead.

Such adjustment of $Rfactor_t$ would affect the Leveraged Return, the Rebalancing Cost, and the Underlying Reference Price used to determine the Intraday Restrike Event. The Air Bag Mechanism would not be triggered if the stock price rises by 20% exclusively because of the dilutive effect of a corporate action.

Where:

$DivExc_t$ is the amount received as an Extraordinary Dividend by a holder of existing Shares for each Share held prior to the Extraordinary Dividend, net of any applicable withholding taxes.

M is the number of new Share(s) (whether a whole or a fraction) per existing Share each holder thereof is entitled to subscribe or to receive (positive amount) or the number of existing Shares redeemed or canceled per existing Share (negative amount), as the case may be, resulting from the corporate action.

R is the subscription price per Share (positive amount) or the redemption price per Share (negative amount) including any dividends or other benefits forgone to be subscribe to or to receive (as applicable), or to redeem a Share.

1. Stock split

Assuming the Underlying Stock is subject to a 1 to 2 stock split (i.e. 1 new Share for every 1 existing share):

$$S_{t-1} = \$100$$

$$S_t = \$51$$

$$Div_t = \$0$$

$$DivExc_t = \$0$$

M = 1 (i.e. 1 new Shares for 1 existing Share)

R = \$0 (no subscription price / redemption price)

$$Rfactor_t = \left[1 - \frac{0 + 0 - 2 \times 0}{100} \right] \times \frac{1}{1 + 1} = 50\%$$

As a consequence:

$$LR_{t-1,t} = \text{Leverage} \times \left(\frac{S_t}{S_{t-1} \times Rfactor_t} - 1 \right) = -3 \times \left(\frac{51}{100 \times 50\%} - 1 \right) = -6\%$$

S_{t-1}	$S_{t-1} \times Rfactor_t$	S_t	Adjusted Underlying Stock Performance
100	50	51	2%

Value of the Certificate (t-1)	Value of the Certificate (t)	Certificates' performance (excluding any cost and fees)
4.00	3.76	-6%

In such case an Intraday Restrike Event would occur if the Underlying Stock price rises to \$60, which is 20% above \$50, the Underlying Stock Reference Price.

2. Share Consolidation

Assuming the Underlying Stock is subject to a 2 to 1 share consolidation (i.e. 1 Share canceled for every 2 existing Shares):

$$S_{t-1} = \$100$$

$$S_t = \$202$$

$$Div_t = \$0$$

$$DivExc_t = \$0$$

M = -0.5 (i.e. 0.5 Shares canceled for each 1 existing Share)

R = \$0 (no subscription price / redemption price)

$$Rfactor_t = \left[1 - \frac{0 + 0 - (-0.5) \times 0}{100} \right] \times \frac{1}{1 + (-0.5)} = 200\%$$

As a consequence:

$$LR_{t-1,t} = \text{Leverage} \times \left(\frac{S_t}{S_{t-1} \times Rfactor_t} - 1 \right) = -3 \times \left(\frac{202}{100 \times 200\%} - 1 \right) = -3\%$$

S_{t-1}	$S_{t-1} \times Rfactor_t$	S_t	Adjusted Underlying Stock Performance
100	200	202	1%

Value of the Certificate (t-1)	Value of the Certificate (t)	Certificates' performance (excluding any cost and fees)
4.00	3.88	-3%

In such case an Intraday Restrike Event would occur if the Underlying Stock price rises to \$240, which is 20% above \$200, the Underlying Stock Reference Price.

3. Rights Issues

Assuming there is a rights issue with respect to the Underlying Stock, with a right to receive 1 new Share for every 2 existing Shares, for a subscription price of \$40.

$$S_{t-1} = \$100$$

$$S_t = \$84$$

$$Div_t = \$0$$

$$DivExc_t = \$0$$

$$R = \$40 \text{ (i.e. subscription price of \$40)}$$

$$M = 0.5 \text{ (i.e. 1 new share for every 2 existing shares)}$$

$$Rfactor_t = \left[1 - \frac{0 + 0 - 0.5 \times 40}{100} \right] \times \frac{1}{1 + 0.5} = 80\%$$

As a consequence:

$$LR_{t-1,t} = \text{Leverage} \times \left(\frac{S_t}{S_{t-1} \times Rfactor_t} - 1 \right) = -3 \times \left(\frac{84}{100 \times 80\%} - 1 \right) = -15\%$$

S_{t-1}	$S_{t-1} \times Rfactor_t$	S_t	Adjusted Underlying Stock Performance
100	80	84	5%

Value of the Certificate (t-1)	Value of the Certificate (t)	Certificates' performance (excluding any cost and fees)
4.00	3.40	-15%

In such case an Intraday Restrike Event would occur if the Underlying Stock price rises to \$96, which is 20% above \$80, the Underlying Stock Reference Price.

4. Bonus Issues

Assuming there is a bonus issue with respect to the Underlying Stock, where shareholders receive 1 bonus share for 5 existing shares:

$$S_{t-1} = \$100$$

$$S_t = \$85$$

$$\text{Div}_t = \$0$$

$$\text{DivExc}_t = \$0$$

$$R = \$0$$

M = 0.2 (i.e. 1 new share for 5 existing shares)

$$Rfactor_t = \left[1 - \frac{0 + 0 - 0.2 \times 0}{100} \right] \times \frac{1}{1 + 0.2} = 83.33\%$$

As a consequence:

$$LR_{t-1,t} = \text{Leverage} \times \left(\frac{S_t}{S_{t-1} \times Rfactor_t} - 1 \right) = -3 \times \left(\frac{85}{100 \times 83.33\%} - 1 \right) = -6\%$$

S_{t-1}	$S_{t-1} \times Rfactor_t$	S_t	Adjusted Underlying Stock Performance
100	83.33	85	2%

Value of the Certificate (t-1)	Value of the Certificate (t)	Certificates' performance (excluding any cost and fees)
4.00	3.76	-6%

In such case an Intraday Restrike Event would occur if the Underlying Stock price rises to \$100, which is 20% above \$83.33, the Underlying Stock Reference Price.

5. Extraordinary Dividend

Assuming there is an extraordinary dividend of \$20 (net of taxes) paid in respect of each stock.

$$S_{t-1} = \$100$$

$$S_t = \$84$$

$$\text{Div}_t = \$0$$

$$\text{DivExc}_t = \$20$$

$$R = \$0$$

$$M = 0$$

$$Rfactor_t = \left[1 - \frac{0 + 20 - 0 \times 0}{100} \right] \times \frac{1}{1 + 0} = 80\%$$

As a consequence:

$$LR_{t-1,t} = \text{Leverage} \times \left(\frac{S_t}{S_{t-1} \times Rfactor_t} - 1 \right) = -3 \times \left(\frac{84}{100 \times 80\%} - 1 \right) = -15\%$$

S_{t-1}	$S_{t-1} \times Rfactor_t$	S_t	Adjusted Underlying Stock Performance
100	80	84	5%

Value of the Certificate (t-1)	Value of the Certificate (t)	Certificates' performance (excluding any cost and fees)
4.00	3.40	-15%

In such case an Intraday Restrike Event would occur if the Underlying Stock price rises to \$96, which is 20% above \$80, the Underlying Stock Reference Price.

INFORMATION RELATING TO THE COMPANY

All information contained in this document regarding the Company, including, without limitation, its financial information, is derived from publicly available information which appears on the web-site of NASDAQ at www.nasdaq.com and/or the Company's web-site at <https://abc.xyz/investor/>. The Issuer has not independently verified any of such information.

Alphabet Inc. (the “**Company**”) operates as a holding company. The Company, through its subsidiaries, provides web-based search, advertisements, maps, software applications, mobile operating systems, consumer content, enterprise solutions, commerce, and hardware products.

The information set out in the Appendix to this document relates to the quarterly report of the Company and its subsidiaries for the period ended 30 June 2024 and has been extracted and reproduced from an announcement by the Company released on 24 July 2024 in relation to the same. Further information relating to the Company may be located on the web-site of NASDAQ at www.nasdaq.com.

INFORMATION RELATING TO THE DESIGNATED MARKET MAKER

Société Générale has been appointed the designated market maker (“DMM”) for the Certificates. The DMM will provide competitive buy and sell quotes for the Certificates continuously during the trading hours of the SGX-ST on the following basis:

- (a) Maximum bid and offer spread : (i) when the best bid price of the Certificate is S\$10 and below: 10 ticks or S\$0.20 whichever is greater; and
(ii) when the best bid price of the Certificate is above S\$10: 5% of the best bid price of the Certificate.
- (b) Minimum quantity subject to bid and offer spread : 10,000 Certificates
- (c) Last Trading Day for Market Making : The date falling 5 Business Days immediately preceding the Expiry Date

In addition, the DMM may not provide quotations in the following circumstances:

- (i) during the pre-market opening and five minutes following the opening of the SGX-ST on any trading day;
- (ii) if the Certificates are valueless (where the Issuer’s bid price is below the minimum bid size for such securities as prescribed by the SGX-ST);
- (iii) when trading in the Underlying Stock is suspended or limited in a material way for any reason (including price quote limits activated by the Relevant Stock Exchange for the Underlying Stock or otherwise⁹), for the avoidance of doubt, the DMM is not obliged to provide quotation for the Certificate at any time when the Underlying Stock is not negotiated/traded for any reason during the last trading session of the Relevant Stock Exchange for the Underlying Stock;
- (iv) when trading of the Underlying Stock on any Related Exchange, or access to pricing information of the Underlying Stock on any Related Exchange is suspended, not available, or limited in a material way for any reason (including price quote limits activated by the Related Exchange on such Underlying Stock or otherwise);
- (v) where the Certificates are suspended from trading for any reason including, but without limitation, as a result of trading in the Underlying Stock on any Related Exchange being suspended, or trading generally on any Related Exchange being suspended;
- (vi) market disruption events, including, without limitation, any suspension of or limitation imposed on trading (including but not limited to unforeseen circumstances such as by reason of movements in price exceeding limits permitted by the SGX-ST or the Relevant Stock Exchange for the Underlying Stock⁹ or any Related Exchange for the Underlying Stock, or

⁹ Price quote limits activated by the Relevant Stock Exchange for the Underlying Stock are not applicable to the market making of the Certificates (as defined herein).

any act of God, war, riot, public disorder, explosion, terrorism or otherwise) in the Underlying Stock, or in trading of the Underlying Stock on any Related Exchange;

- (vii) where the Issuer or the DMM faces technical problems affecting the ability of the DMM to provide bids and offer quotations;
- (viii) where the ability of the Issuer to source a hedge or unwind an existing hedge, as determined by the Issuer in good faith, is materially affected by the prevailing market conditions, and the Issuer informs the SGX-ST of its inability to do so as soon as practicable;
- (ix) in cases where the Issuer has no Certificates to sell, then the DMM will only provide bid quotations. The DMM may provide intermittent offer quotations when it has inventory of the Certificates;
- (x) if the SGX-ST, the Relevant Stock Exchange for the Underlying Stock or any Related Exchange experiences exceptional price movement and volatility;
- (xi) when any Related Exchange(s) relating to the trading of the Underlying Stock and the Relevant Stock Exchange for the Underlying Stock are not open for dealings concurrently;
- (xii) when it is a public holiday in Singapore and the SGX-ST is not open for dealings; and
- (xiii) during trading hours of the SGX-ST on any Business Day when it is a public holiday in the United States and the Relevant Stock Exchange for the Underlying Stock is not open for dealings.

The last trading day on which the DMM will provide competitive quotations for the Certificates would be the fifth Business Day immediately preceding the Expiry Date.

SUPPLEMENTAL GENERAL INFORMATION

The information set out herein is supplemental to, and should be read in conjunction with the information set out in the Base Listing Document.

1. Save as disclosed in this document and the Base Listing Document, neither the Issuer nor the Guarantor is involved in any legal or arbitration proceedings (including any proceedings which are pending or threatened of which the Issuer or the Guarantor is aware) which may have or have had in the previous 12 months a significant effect on the financial position of the Issuer or the Guarantor in the context of the issuance of the Certificates.
2. Settlement of trades done on a normal “ready basis” on the SGX-ST generally take place on the second Business Day following the transaction. Dealing in the Certificates will take place in Board Lots in Singapore Dollar. For further details on the transfer of Certificates and their exercise, please refer to the section headed “Summary of the Issue” above.
3. It is not the current intention of the Issuer to apply for a listing of the Certificates on any stock exchange other than the SGX-ST.
4. Save as disclosed in the Base Listing Document and herein, there has been no material adverse change in the financial position or prospects of the Issuer since 30 June 2024 or the Guarantor since 30 June 2024, in the context of the issuance of Certificates hereunder.
5. The following contracts, relating to the issue of the Certificates, have been or will be entered into by the Issuer and/or the Guarantor and may be material to the issue of the Certificates:
 - (a) the Guarantee;
 - (b) the Master Instrument; and
 - (c) the Master Warrant Agent Agreement.

None of the directors of the Issuer and the Guarantor has any direct or indirect interest in any of the above contracts.

6. The reports of the Auditors of the Issuer and the Guarantor were not prepared exclusively for incorporation into this document.

The Auditors of the Issuer and the Guarantor have no shareholding in the Issuer or the Guarantor or any of its subsidiaries, nor do they have the right (whether legally enforceable or not) to subscribe for or to nominate persons to subscribe for securities of the Issuer or the Guarantor or any of its subsidiaries.
7. The Certificates are not fully covered by the Underlying Stock held by Issuer or a trustee for and on behalf of the Issuer. The Issuer has appropriate risk management capabilities to manage the issue of the Certificates.
8. Société Générale, Singapore Branch, currently of 8 Marina Boulevard, #12-01 Marina Bay Financial Centre Tower 1, Singapore 018981, has been authorised to accept, on behalf of the Issuer and the Guarantor, service of process and any other notices required to be served on the Issuer or the Guarantor. Any notices required to be served on the Issuer or the Guarantor should be sent to Société Générale at the above address for the attention of Société Générale Legal Department.
9. Copies of the following documents may be inspected during usual business hours on any weekday (Saturdays, Sundays and holidays excepted) at the offices of Société Générale,

Singapore Branch at 8 Marina Boulevard, #12-01 Marina Bay Financial Centre Tower 1, Singapore 018981, during the period of 14 days from the date of this document:

- (a) the Memorandum and Articles of Association of the Issuer and the Constitutional Documents of the Guarantor;
- (b) the latest financial reports (including the notes thereto) of the Issuer;
- (c) the latest financial reports (including the notes thereto) of the Guarantor;
- (d) the Base Listing Document (which can also be viewed at: <https://www.sgx.com/securities/prospectus-circulars-offer-documents>);
- (e) this document; and
- (f) the Guarantee.

PLACING AND SALE

General

No action has been or will be taken by the Issuer that would permit a public offering of the Certificates or possession or distribution of any offering material in relation to the Certificates in any jurisdiction where action for that purpose is required. No offers, sales or deliveries of any Certificates, or distribution of any offering material relating to the Certificates may be made in or from any jurisdiction except in circumstances which will result in compliance with any applicable laws or regulations and will not impose any obligation on the Issuer. In the event that the Issuer contemplates a placing, placing fees may be payable in connection with the issue and the Issuer may at its discretion allow discounts to placees.

Each Certificate Holder undertakes that it will inform any subsequent purchaser of the terms and conditions of the Certificates and all such subsequent purchasers as may purchase such securities from time to time shall be deemed to be a Certificate Holder for the purposes of the Certificates and shall be bound by the terms and conditions of the Certificates.

Singapore

This document has not been registered as a prospectus with the Monetary Authority of Singapore. Accordingly, this document and any other document or material in connection with the offer or sale, or invitation for subscription or purchase, of Certificates may not be circulated or distributed, nor may Certificates be offered or sold, or be made the subject of an invitation for subscription or purchase, whether directly or indirectly, to persons in Singapore other than pursuant to, and in accordance with the conditions of, any applicable provision of the Securities and Futures Act 2001 of Singapore.

Hong Kong

Each dealer has represented and agreed, and each further dealer appointed in respect of the Certificates and each other purchaser will be required to represent and agree, that:

- (a) it has not offered or sold and will not offer or sell in Hong Kong, by means of any document, any Certificates (except for Certificates which are a "structured product" as defined in the Securities and Futures Ordinance (Cap.571) of Hong Kong ("SFO")) other than (i) to "professional investors" as defined in the SFO and any rules made under the SFO; or (ii) in other circumstances which do not result in the document being a "prospectus", as defined in the Companies (Winding Up and Miscellaneous Provisions) Ordinance (Cap. 32) of Hong Kong ("CWUMPO") or which do not constitute an offer to the public within the meaning of the CWUMPO; and
- (b) it has not issued or had in its possession for the purposes of issue, and will not issue or have in its possession for the purposes of issue, whether in Hong Kong or elsewhere, any advertisement, invitation or document relating to the Certificates, which is directed at, or the contents of which are likely to be accessed or read by, the public of Hong Kong (except if permitted to do so under the securities laws of Hong Kong) other than with respect to Certificates which are or are intended to be disposed of only to persons outside Hong Kong or only to "professional investors" as defined in the SFO and any rules made under the SFO.

European Economic Area

Each dealer represents and agrees, and each further dealer appointed in respect of the Certificates will be required to represent and agree, that it has not offered, sold or otherwise made

available and will not offer, sell, or otherwise make available any Certificates which are the subject of the offering as contemplated by this document to any retail investor in the European Economic Area. For the purposes of this provision:

- (a) the expression “**retail investor**” means a person who is one (or more) of the following:
 - (i) a retail client as defined in point (11) of Article 4(1) of Directive 2014/65/EU (as amended, “**MiFID II**”); or
 - (ii) a customer within the meaning of Directive (EU) 2016/97 (as amended, the Insurance Distribution Directive), where that customer would not qualify as a professional client as defined in point (10) of Article 4(1) of MiFID II; or
 - (iii) not a qualified investor as defined in Regulation (EU) 2017/1129 (as amended and superseded, the Prospectus Regulation); and
- (b) the expression “**offer**” includes the communication in any form and by any means of sufficient information on the terms of the offer and the Certificates to be offered so as to enable an investor to decide to purchase or subscribe for the Certificates.

United Kingdom

Each dealer represents and agrees, and each further dealer appointed in respect of the Certificates will be required to represent and agree, that it has not offered, sold or otherwise made available and will not offer, sell or otherwise make available any Certificates which are the subject of the offering as contemplated by this document to any retail investor in the United Kingdom. For the purposes of this provision:

- (a) the expression “**retail investor**” means a person who is one (or more) of the following:
 - (i) a retail client, as defined in point (8) of Article 2 of Regulation (EU) No 2017/565 as it forms part of domestic law by virtue of the European Union (Withdrawal) Act 2018 (“**EUWA**”); or
 - (ii) a customer within the meaning of the provisions of the Financial Services and Markets Act, as amended (the “**FSMA**”) and any rules or regulations made under the FSMA to implement Directive (EU) 2016/97, where that customer would not qualify as a professional client, as defined in point (8) of Article 2(1) of Regulation (EU) No 600/2014 as it forms part of domestic law by virtue of the EUWA; or
 - (iii) not a qualified investor as defined in Article 2 of Regulation (EU) 2017/1129 as it forms part of domestic law by virtue of the EUWA; and
- (b) the expression an “**offer**” includes the communication in any form and by any means of sufficient information on the terms of the offer and the Certificates to be offered so as to enable an investor to decide to purchase or subscribe for the Certificates.

Each dealer further represents and agrees, and each further dealer appointed in respect of the Certificates will be required to further represent and agree, that:

- (a) in respect to Certificates having a maturity of less than one year: (i) it is a person whose ordinary activities involve it in acquiring, holding, managing or disposing of investments (as principal or agent) for the purposes of its business; and (ii) it has not offered or sold and will not offer or sell any Certificates other than to persons whose ordinary activities involve them in acquiring, holding, managing or disposing of investments (as principal or agent) for the purposes of their businesses or who it is reasonable to expect will acquire, hold, manage or

dispose of investments (as principal or agent) for the purposes of their businesses where the issue of the Certificates would otherwise constitute a contravention of Section 19 of the FSMA by the Issuer;

- (b) it has only communicated or caused to be communicated and will only communicate or cause to be communicated an invitation or inducement to engage in investment activity (within the meaning of section 21 of the FSMA) received by it in connection with the issue or sale of any Certificates in circumstances in which section 21(1) of the FSMA does not apply to the Issuer or the Guarantor; and
- (c) it has complied and will comply with all applicable provisions of the FSMA with respect to anything done by it in relation to any Certificates in, from or otherwise involving the United Kingdom.

United States

The Certificates and the Guarantee have not been and will not be registered under the United States Securities Act of 1933, as amended (the “**Securities Act**”) or any state securities law, and trading in the Certificates has not been approved by the United States Commodity Futures Trading Commission (the “**CFTC**”) under the United States Commodity Exchange Act of 1936, as amended (the “**Commodity Exchange Act**”) and the Issuer has not been and will not be registered as an investment company under the United States Investment Company Act of 1940, as amended, and the rules and regulations thereunder. None of the Securities and Exchange Commission, any state securities commission or regulatory authority or any other United States, French or other regulatory authority has approved or disapproved of the Certificates or the Guarantee or passed upon the accuracy or adequacy of this document. Accordingly, Certificates, or interests therein, may not at any time be offered, sold, resold, traded, pledged, exercised, redeemed, transferred or delivered, directly or indirectly, in the United States or to, or for the account or benefit of, U.S. persons, nor may any U.S. person at any time trade, own, hold or maintain a position in the Certificates or any interests therein. In addition, in the absence of relief from the CFTC, offers, sales, re-sales, trades, pledges, exercises, redemptions, transfers or deliveries of Certificates, or interests therein, directly or indirectly, in the United States or to, or for the account or benefit of, U.S. persons, may constitute a violation of United States law governing commodities trading and commodity pools. Consequently, any offer, sale, resale, trade, pledge, exercise, redemption, transfer or delivery made, directly or indirectly, within the United States or to, or for the account or benefit of, a U.S. person will not be recognised.

Each dealer has represented and agreed, and each further dealer will be required to represent and agree, that it has not and will not at any time offer, sell, resell, trade, pledge, exercise, redeem, transfer or deliver, directly or indirectly, Certificates in the United States or to, or for the account or benefit of, any U.S. person or to others for offer, sale, resale, trade, pledge, exercise, redeem, transfer or delivery, directly or indirectly, in the United States or to, or for the account or benefit of, any such U.S. person. Any person purchasing Certificates of any tranches must agree with the relevant dealer or the seller of such Certificates that (i) it is not a U.S. Person, (ii) it will not at any time offer, sell, resell, trade, pledge, exercise, redeem, transfer or deliver, directly or indirectly, any Certificates in the United States or to, or for the account or benefit of, any U.S. person or to others for offer, sale, resale, trade, pledge, exercise, redemption, transfer or delivery, directly or indirectly, in the United States or to, or for the account or benefit of, any U.S. person, and (iii) it is not purchasing any Certificates, directly or indirectly, in the United States or for the account or benefit of any U.S. person.

Exercise or otherwise redemption of Certificates will be conditional upon certification that each person exercising or otherwise redeeming a Certificate is not a U.S. person or in the United States and that the Certificate is not being exercised or otherwise redeemed on behalf of a U.S.

person. No payment will be made to accounts of holders of the Certificates located in the United States.

As used in the preceding paragraphs, the term “**United States**” includes the territories, the possessions and all other areas subject to the jurisdiction of the United States of America, and the term “**U.S. person**” means any person who is (i) a U.S. person as defined under Regulation S under the Securities Act, (ii) a U.S. person as defined in paragraph 7701(a)(30) of the Internal Revenue Code of 1986 (iii) a person who comes within any definition of U.S. person for the purposes of the United States Commodity Exchange Act of 1936, as amended (the “**CEA**”) or any rules thereunder of the CFTC (the “**CFTC Rules**”), guidance or order proposed or issued under the CEA (for the avoidance of doubt, any person who is not a “Non-United States person” defined under CFTC Rule 4.7(a)(1)(iv), but excluding, for purposes of subsection (D) thereof, the exception for qualified eligible persons who are not “Non-United States persons”, shall be considered a U.S. person), or (iv) a U.S. Person for purposes of the final rules implementing the credit risk retention requirements of Section 15G of the U.S. Securities Exchange Act of 1934, as amended.

APPENDIX

REPRODUCTION OF THE QUARTERLY REPORT FOR THE PERIOD ENDED 30 JUNE 2024 OF ALPHABET INC. AND ITS SUBSIDIARIES

The information set out below is a reproduction of the quarterly report of the Company and its subsidiaries for the period ended 30 June 2024 and has been extracted and reproduced from an announcement by the Company released on 24 July 2024 in relation to the same.

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

FORM 10-Q

(Mark One)

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

For the quarterly period ended June 30, 2024
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

(State or other jurisdiction of incorporation or organization)

61-1767919

(I.R.S. Employer Identification Number)

**1600 Amphitheatre Parkway
Mountain View, CA 94043**

(Address of principal executive offices, including zip code)

(650) 253-0000

(Registrant's telephone number, including area code)

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

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

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

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

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

Large accelerated filer	<input checked="" type="checkbox"/>	Accelerated filer	<input type="checkbox"/>
Non-accelerated filer	<input type="checkbox"/>	Smaller reporting company	<input type="checkbox"/>
Emerging growth company	<input type="checkbox"/>		

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

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

As of July 16, 2024, there were 5,859 million shares of Alphabet's Class A stock outstanding, 866 million shares of Alphabet's Class B stock outstanding, and 5,585 million shares of Alphabet's Class C stock outstanding.

Alphabet Inc.
Form 10-Q
For the Quarterly Period Ended June 30, 2024

TABLE OF CONTENTS

	<u>Page No.</u>
Note About Forward-Looking Statements	3
PART I. FINANCIAL INFORMATION	
Item 1 Financial Statements	5
Consolidated Balance Sheets - December 31, 2023 and June 30, 2024	5
Consolidated Statements of Income - Three and Six Months Ended June 30, 2023 and 2024	6
Consolidated Statements of Comprehensive Income - Three and Six Months Ended June 30, 2023 and 2024	7
Consolidated Statements of Stockholders' Equity - Three and Six Months Ended June 30, 2023 and 2024	8
Consolidated Statements of Cash Flows - Six Months Ended June 30, 2023 and 2024	10
Notes to Consolidated Financial Statements	11
Item 2 Management's Discussion and Analysis of Financial Condition and Results of Operations	33
Item 3 Quantitative and Qualitative Disclosures About Market Risk	47
Item 4 Controls and Procedures	47
PART II. OTHER INFORMATION	
Item 1 Legal Proceedings	49
Item 1A Risk Factors	49
Item 2 Unregistered Sales of Equity Securities and Use of Proceeds	49
Item 5 Other Information	50
Item 6 Exhibits	51
Signatures	52

Note About Forward-Looking Statements

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

- the growth of our business and revenues and our expectations about the factors that influence our success and trends in our business;
- fluctuations in our revenues and margins and various factors contributing to such fluctuations;
- our expectation that the continuing shift from an offline to online world will continue to benefit our business;
- our expectation that the portion of our revenues that we derive beyond advertising will continue to increase and may affect our margins;
- our expectation that our traffic acquisition costs (TAC) and the associated TAC rate will fluctuate, which could affect our overall margins;
- our expectation that our monetization trends will fluctuate, which could affect our revenues and margins;
- fluctuations in paid clicks and cost-per-click as well as impressions and cost-per-impression, and various factors contributing to such fluctuations;
- our expectation that we will continue to periodically review, refine, and update our methodologies for monitoring, gathering, and counting the number of paid clicks and impressions;
- our expectation that our results will be affected by our performance in international markets as users in developing economies increasingly come online;
- our expectation that our foreign exchange risk management program will not fully offset our net exposure to fluctuations in foreign currency exchange rates;
- the expected variability of gains and losses related to hedging activities under our foreign exchange risk management program;
- the amount and timing of revenue recognition from customer contracts with commitments for performance obligations, including our estimate of the remaining amount of commitments and when we expect to recognize revenue;
- our expectation that our capital expenditures will increase, including the expected increase in our technical infrastructure investment to support the growth of our business and our long-term initiatives, in particular in support of artificial intelligence (AI) products and services;
- our plans to continue to invest in new businesses, products, services and technologies, and systems, as well as to continue to invest in acquisitions and strategic investments;
- our pace of hiring and our plans to provide competitive compensation programs;
- our expectation that our cost of revenues, research and development (R&D) expenses, sales and marketing expenses, and general and administrative expenses may increase in amount and/or may increase as a percentage of revenues and may be affected by a number of factors;
- estimates of our future compensation expenses;
- our expectation that our other income (expense), net (OI&E), will fluctuate in the future, as it is largely driven by market dynamics;
- our expectation that our effective tax rate and cash tax payments could increase in future years;
- seasonal fluctuations in internet usage and advertiser expenditures, underlying business trends such as traditional retail seasonality, which are likely to cause fluctuations in our quarterly results;
- the sufficiency of our sources of funding;
- our potential exposure in connection with new and pending investigations, proceedings, and other contingencies, including the possibility that certain legal proceedings to which we are a party could harm our business, financial condition, and operating results;
- our expectation that we will continue to face heightened regulatory scrutiny, and changes in regulatory conditions, laws, and public policies, which could affect our business practices and financial results;

- the expected timing, amount, and effect of Alphabet Inc.'s share repurchases and dividends;
- our long-term sustainability and diversity 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: Part I, Item 2, "Management's Discussion and Analysis of Financial Condition and Results of Operations" in this Quarterly Report on Form 10-Q and Part I, Item 1A, "Risk Factors" in our Annual Report on Form 10-K for the fiscal year ended December 31, 2023, as updated in our subsequent Quarterly Reports on Form 10-Q, including in this Quarterly Report on Form 10-Q. Forward-looking statements generally can be identified by words such as "anticipates," "believes," "could," "estimates," "expects," "intends," "may," "plans," "predicts," "projects," "will be," "will continue," "will likely result," and similar expressions. These forward-looking statements are based on current expectations and assumptions that are subject to risks and uncertainties, which could cause our actual results to differ materially from those reflected in the forward-looking statements. Factors that could cause or contribute to such differences include, but are not limited to, those discussed in this Quarterly Report on Form 10-Q; the risks discussed in Part I, Item 1A, "Risk Factors" in our Annual Report on Form 10-K for the fiscal year ended December 31, 2023, as updated in our subsequent Quarterly Reports on Form 10-Q, including in this Quarterly Report on Form 10-Q; the trends discussed in Part II, Item 7, "Management's Discussion and Analysis of Financial Condition and Results of Operations" in our Annual Report on Form 10-K for the fiscal year ended December 31, 2023; 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. We do not intend our use or display of other companies' trade names or trademarks to imply an endorsement or sponsorship of us by such companies, or any relationship with any of these companies.

PART I. FINANCIAL INFORMATION**ITEM 1. FINANCIAL STATEMENTS**

Alphabet Inc.
CONSOLIDATED BALANCE SHEETS
(in millions, except par value per share amounts)

	As of December 31, 2023	As of June 30, 2024 (unaudited)
Assets		
Current assets:		
Cash and cash equivalents	\$ 24,048	\$ 27,225
Marketable securities	86,868	73,500
Total cash, cash equivalents, and marketable securities	110,916	100,725
Accounts receivable, net	47,964	47,087
Other current assets	12,650	14,183
Total current assets	171,530	161,995
Non-marketable securities	31,008	34,172
Deferred income taxes	12,169	14,958
Property and equipment, net	134,345	151,155
Operating lease assets	14,091	13,606
Goodwill	29,198	29,185
Other non-current assets	10,051	9,699
Total assets	<u>\$ 402,392</u>	<u>\$ 414,770</u>
Liabilities and Stockholders' Equity		
Current liabilities:		
Accounts payable	\$ 7,493	\$ 6,092
Accrued compensation and benefits	15,140	11,373
Accrued expenses and other current liabilities	46,168	47,298
Accrued revenue share	8,876	8,899
Deferred revenue	4,137	4,251
Total current liabilities	81,814	77,913
Long-term debt	13,253	13,238
Deferred revenue, non-current	911	985
Income taxes payable, non-current	8,474	7,703
Deferred income taxes	485	717
Operating lease liabilities	12,460	11,708
Other long-term liabilities	1,616	1,753
Total liabilities	119,013	114,017
Commitments and Contingencies (Note 8)		
Stockholders' equity:		
Preferred stock, \$0.001 par value per share, 100 shares authorized; no shares issued and outstanding	0	0
Class A, Class B, and Class C stock and additional paid-in capital, \$0.001 par value per share: 300,000 shares authorized (Class A 180,000, Class B 60,000, Class C 60,000); 12,460 (Class A 5,899, Class B 870, Class C 5,691) and 12,322 (Class A 5,860, Class B 866, Class C 5,596) shares issued and outstanding	76,534	79,732
Accumulated other comprehensive income (loss)	(4,402)	(5,012)
Retained earnings	211,247	226,033
Total stockholders' equity	283,379	300,753
Total liabilities and stockholders' equity	<u>\$ 402,392</u>	<u>\$ 414,770</u>

See accompanying notes.

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

	Three Months Ended June 30,		Six Months Ended June 30,	
	2023	2024	2023	2024
Revenues	\$ 74,604	\$ 84,742	\$ 144,391	\$ 165,281
Costs and expenses:				
Cost of revenues	31,916	35,507	62,528	69,219
Research and development	10,588	11,860	22,056	23,763
Sales and marketing	6,781	6,792	13,314	13,218
General and administrative	3,481	3,158	7,240	6,184
Total costs and expenses	52,766	57,317	105,138	112,384
Income from operations	21,838	27,425	39,253	52,897
Other income (expense), net	65	126	855	2,969
Income before income taxes	21,903	27,551	40,108	55,866
Provision for income taxes	3,535	3,932	6,689	8,585
Net income	<u>\$ 18,368</u>	<u>\$ 23,619</u>	<u>\$ 33,419</u>	<u>\$ 47,281</u>
Basic net income per share (Note 10)	\$ 1.45	\$ 1.91	\$ 2.63	\$ 3.82
Diluted net income per share (Note 10)	\$ 1.44	\$ 1.89	\$ 2.61	\$ 3.78

See accompanying notes.

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

	Three Months Ended June 30,		Six Months Ended June 30,	
	2023	2024	2023	2024
Net income	\$ 18,368	\$ 23,619	\$ 33,419	\$ 47,281
Other comprehensive income (loss):				
Change in foreign currency translation adjustment, net of income tax benefit (expense) of \$13, \$(26), \$60 and \$(44)	235	(447)	831	(950)
Available-for-sale investments:				
Change in net unrealized gains (losses)	(570)	(93)	296	(453)
Less: reclassification adjustment for net (gains) losses included in net income	198	230	490	541
Net change, net of income tax benefit (expense) of \$106, \$(40), \$(224) and \$(26)	(372)	137	786	88
Cash flow hedges:				
Change in net unrealized gains (losses)	151	232	77	418
Less: reclassification adjustment for net (gains) losses included in net income	(5)	(95)	(82)	(166)
Net change, net of income tax benefit (expense) of \$(11), \$(27), \$19 and \$(50)	146	137	(5)	252
Other comprehensive income (loss)	9	(173)	1,612	(610)
Comprehensive income	<u>\$ 18,377</u>	<u>\$ 23,446</u>	<u>\$ 35,031</u>	<u>\$ 46,671</u>

See accompanying notes.

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

Three Months Ended June 30, 2023

	Class A, Class B, Class C Stock and Additional Paid-In Capital		Accumulated Other Comprehensive Income (Loss)	Retained Earnings	Total Stockholders' Equity
	Shares	Amount			
Balance as of March 31, 2023	12,722	\$ 70,269	\$ (6,000)	\$ 196,625	\$ 260,894
Stock issued	38	0	0	0	0
Stock-based compensation expense	0	5,815	0	0	5,815
Tax withholding related to vesting of restricted stock units and other	0	(2,831)	0	0	(2,831)
Repurchases of stock	(131)	(1,005)	0	(14,109)	(15,114)
Net income	0	0	0	18,368	18,368
Other comprehensive income (loss)	0	0	9	0	9
Balance as of June 30, 2023	<u>12,629</u>	<u>\$ 72,248</u>	<u>\$ (5,991)</u>	<u>\$ 200,884</u>	<u>\$ 267,141</u>

Six Months Ended June 30, 2023

	Class A, Class B, Class C Stock and Additional Paid-In Capital		Accumulated Other Comprehensive Income (Loss)	Retained Earnings	Total Stockholders' Equity
	Shares	Amount			
Balance as of December 31, 2022	12,849	\$ 68,184	\$ (7,603)	\$ 195,563	\$ 256,144
Stock issued	68	0	0	0	0
Stock-based compensation expense	0	11,128	0	0	11,128
Tax withholding related to vesting of restricted stock units and other	0	(4,924)	0	0	(4,924)
Repurchases of stock	(288)	(2,140)	0	(28,098)	(30,238)
Net income	0	0	0	33,419	33,419
Other comprehensive income (loss)	0	0	1,612	0	1,612
Balance as of June 30, 2023	<u>12,629</u>	<u>\$ 72,248</u>	<u>\$ (5,991)</u>	<u>\$ 200,884</u>	<u>\$ 267,141</u>

Three Months Ended June 30, 2024

	Class A, Class B, Class C Stock and Additional Paid-In Capital		Accumulated Other Comprehensive Income (Loss)	Retained Earnings	Total Stockholders' Equity
	Shares	Amount			
Balance as of March 31, 2024	12,381	\$ 77,913	\$ (4,839)	\$ 219,770	\$ 292,844
Stock issued	33	0	0	0	0
Stock-based compensation expense	0	5,908	0	0	5,908
Tax withholding related to vesting of restricted stock units and other	0	(3,304)	0	0	(3,304)
Repurchases of stock	(92)	(789)	0	(14,809)	(15,598)
Dividends and dividend equivalents declared (\$0.20 per share)	0	4	0	(2,547)	(2,543)
Net income	0	0	0	23,619	23,619
Other comprehensive income (loss)	0	0	(173)	0	(173)
Balance as of June 30, 2024	<u>12,322</u>	<u>\$ 79,732</u>	<u>\$ (5,012)</u>	<u>\$ 226,033</u>	<u>\$ 300,753</u>

Six Months Ended June 30, 2024

	Class A, Class B, Class C Stock and Additional Paid-In Capital		Accumulated Other Comprehensive Income (Loss)	Retained Earnings	Total Stockholders' Equity
	Shares	Amount			
Balance as of December 31, 2023	12,460	\$ 76,534	\$ (4,402)	\$ 211,247	\$ 283,379
Stock issued	65	0	0	0	0
Stock-based compensation expense	0	11,201	0	0	11,201
Tax withholding related to vesting of restricted stock units and other	0	(6,300)	0	0	(6,300)
Repurchases of stock	(203)	(1,707)	0	(29,948)	(31,655)
Dividends and dividend equivalents declared (\$0.20 per share)	0	4	0	(2,547)	(2,543)
Net income	0	0	0	47,281	47,281
Other comprehensive income (loss)	0	0	(610)	0	(610)
Balance as of June 30, 2024	<u>12,322</u>	<u>\$ 79,732</u>	<u>\$ (5,012)</u>	<u>\$ 226,033</u>	<u>\$ 300,753</u>

See accompanying notes.

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

	Six Months Ended June 30,	
	2023	2024
Operating activities		
Net income	\$ 33,419	\$ 47,281
Adjustments:		
Depreciation of property and equipment	5,459	7,121
Stock-based compensation expense	11,058	11,129
Deferred income taxes	(4,269)	(2,738)
Loss (gain) on debt and equity securities, net	425	(757)
Other	1,774	1,185
Changes in assets and liabilities, net of effects of acquisitions:		
Accounts receivable, net	1,506	110
Income taxes, net	8,520	(889)
Other assets	(1,259)	(1,532)
Accounts payable	14	(563)
Accrued expenses and other liabilities	(4,037)	(5,176)
Accrued revenue share	(418)	97
Deferred revenue	(17)	220
Net cash provided by operating activities	<u>52,175</u>	<u>55,488</u>
Investing activities		
Purchases of property and equipment	(13,177)	(25,198)
Purchases of marketable securities	(35,589)	(43,011)
Maturities and sales of marketable securities	37,049	58,577
Purchases of non-marketable securities	(1,513)	(2,199)
Maturities and sales of non-marketable securities	181	605
Acquisitions, net of cash acquired, and purchases of intangible assets	(340)	(87)
Other investing activities	(357)	(32)
Net cash used in investing activities	<u>(13,746)</u>	<u>(11,345)</u>
Financing activities		
Net payments related to stock-based award activities	(4,725)	(6,138)
Repurchases of stock	(29,526)	(31,380)
Dividend payments	0	(2,466)
Proceeds from issuance of debt, net of costs	8,050	4,875
Repayments of debt	(8,207)	(5,502)
Proceeds from sale of interest in consolidated entities, net	5	8
Net cash used in financing activities	<u>(34,403)</u>	<u>(40,603)</u>
Effect of exchange rate changes on cash and cash equivalents	24	(363)
Net increase (decrease) in cash and cash equivalents	4,050	3,177
Cash and cash equivalents at beginning of period	21,879	24,048
Cash and cash equivalents at end of period	<u>\$ 25,929</u>	<u>\$ 27,225</u>

See accompanying notes.

Alphabet Inc.
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS
(Unaudited)

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

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

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

Basis of Consolidation

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

Unaudited Interim Financial Information

These unaudited interim consolidated financial statements have been prepared in accordance with generally accepted accounting principles in the United States (GAAP), and in our opinion, include all adjustments of a normal recurring nature necessary for fair financial statement presentation. Interim results are not necessarily indicative of the results to be expected for the full year ending December 31, 2024. We have made estimates and assumptions that affect the amounts reported and disclosed in the financial statements and the accompanying notes. Actual results could differ materially from these estimates.

These consolidated financial statements and other information presented in this Form 10-Q should be read in conjunction with the consolidated financial statements and the related notes included in our Annual Report on Form 10-K for the fiscal year ended December 31, 2023 filed with the SEC.

Recent Accounting Pronouncements

In November 2023, the Financial Accounting Standards Board (FASB) issued Accounting Standards Update (ASU) 2023-07 "Segment Reporting (Topic 280): Improvements to Reportable Segment Disclosures" which expands annual and interim disclosure requirements for reportable segments, primarily through enhanced disclosures about significant segment expenses. ASU 2023-07 is effective for our annual periods beginning January 1, 2024, and for interim periods beginning January 1, 2025, with early adoption permitted. We are currently evaluating the potential effect that the updated standard will have on our financial statement disclosures.

In December 2023, the FASB issued ASU 2023-09 "Income Taxes (Topics 740): Improvements to Income Tax Disclosures" to expand the disclosure requirements for income taxes. Upon adoption we will be required to disclose standardized categories in the rate reconciliation in both percentage and dollar amounts. ASU 2023-09 will also require income taxes paid to be disaggregated by jurisdiction, among other disclosure requirements. We will adopt ASU 2023-09 for our annual periods beginning January 1, 2025.

Prior Period Reclassifications

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

Note 2. Revenues**Disaggregated Revenues**

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

	Three Months Ended		Six Months Ended	
	June 30,		June 30,	
	2023	2024	2023	2024
Google Search & other	\$ 42,628	\$ 48,509	\$ 82,987	\$ 94,665
YouTube ads	7,665	8,663	14,358	16,753
Google Network	7,850	7,444	15,346	14,857
Google advertising	58,143	64,616	112,691	126,275
Google subscriptions, platforms, and devices	8,142	9,312	15,555	18,051
Google Services total	66,285	73,928	128,246	144,326
Google Cloud	8,031	10,347	15,485	19,921
Other Bets	285	365	573	860
Hedging gains (losses)	3	102	87	174
Total revenues	\$ 74,604	\$ 84,742	\$ 144,391	\$ 165,281

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

	Three Months Ended				Six Months Ended			
	June 30,				June 30,			
	2023		2024		2023		2024	
United States	\$ 35,073	47 %	\$ 41,196	49 %	\$ 67,937	47 %	\$ 79,933	48 %
EMEA ⁽¹⁾	22,289	30	24,683	29	43,367	30	48,471	29
APAC ⁽¹⁾	12,728	17	13,823	16	24,409	17	27,112	17
Other Americas ⁽¹⁾	4,511	6	4,938	6	8,591	6	9,591	6
Hedging gains (losses)	3	0	102	0	87	0	174	0
Total revenues	\$ 74,604	100 %	\$ 84,742	100 %	\$ 144,391	100 %	\$ 165,281	100 %

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

Revenue Backlog

As of June 30, 2024, we had \$78.8 billion of remaining performance obligations ("revenue backlog"), primarily related to Google Cloud. Our revenue backlog represents commitments in customer contracts for future services that have not yet been recognized as revenue. The estimated revenue backlog and timing of revenue recognition for these commitments is largely driven by our ability to deliver in accordance with relevant contract terms and when our customers utilize services. We expect to recognize approximately half of the revenue backlog as revenues over the next 24 months with the remaining to be recognized thereafter. Revenue backlog includes related deferred revenue currently recorded as well as amounts that will be invoiced in future periods, and excludes contracts with an original expected term of one year or less and cancellable contracts.

Deferred Revenues

We record deferred revenues when cash payments are received or due in advance of our performance, including amounts which are refundable. Deferred revenues primarily relate to Google Cloud and Google subscriptions, platforms, and devices. Total deferred revenue as of December 31, 2023 was \$5.0 billion, of which \$2.9 billion was recognized as revenues during the six months ended June 30, 2024.

Note 3. Financial Instruments**Fair Value Measurements****Investments Measured at Fair Value on a Recurring Basis**

Cash, cash equivalents, and marketable equity securities are measured at fair value and classified within Level 1 and Level 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.

Debt securities are measured at fair value and classified within Level 2 in the fair value hierarchy, because we use quoted market prices to the extent available or alternative pricing sources and models utilizing market observable inputs to determine fair value. For certain marketable debt securities, we have elected the fair value option for which changes in fair value are recorded in OI&E. The fair value option was elected for these securities to align with the unrealized gains and losses from related derivative contracts.

The following tables summarize our cash, cash equivalents, and marketable securities measured at fair value on a recurring basis (in millions):

		As of December 31, 2023					
	Fair Value Hierarchy	Adjusted Cost	Gross Unrealized Gains	Gross Unrealized Losses	Fair Value	Cash and Cash Equivalents	Marketable Securities
Fair value changes recorded in other comprehensive income							
Time deposits	Level 2	\$ 2,628	\$ 0	\$ 0	\$ 2,628	\$ 2,628	\$ 0
Government bonds	Level 2	38,106	233	(679)	37,660	1,993	35,667
Corporate debt securities	Level 2	22,457	112	(637)	21,932	0	21,932
Mortgage-backed and asset-backed securities	Level 2	17,243	88	(634)	16,697	0	16,697
Total investments with fair value change reflected in other comprehensive income ⁽¹⁾		<u>\$ 80,434</u>	<u>\$ 433</u>	<u>\$ (1,950)</u>	<u>\$ 78,917</u>	<u>\$ 4,621</u>	<u>\$ 74,296</u>
Fair value adjustments recorded in net income							
Money market funds	Level 1				\$ 6,480	\$ 6,480	\$ 0
Current marketable equity securities ⁽²⁾	Level 1				4,282	0	4,282
Mutual funds	Level 2				311	0	311
Government bonds	Level 2				1,952	347	1,605
Corporate debt securities	Level 2				3,782	91	3,691
Mortgage-backed and asset-backed securities	Level 2				2,683	0	2,683
Total investments with fair value change recorded in net income					<u>\$ 19,490</u>	<u>\$ 6,918</u>	<u>\$ 12,572</u>
Cash					0	12,509	0
Total		<u>\$ 80,434</u>	<u>\$ 433</u>	<u>\$ (1,950)</u>	<u>\$ 98,407</u>	<u>\$ 24,048</u>	<u>\$ 86,868</u>

⁽¹⁾ Represents gross unrealized gains and losses for debt securities recorded to accumulated other comprehensive income (AOCI).

⁽²⁾ The long-term portion of marketable equity securities (subject to long-term lock-up restrictions) of \$1.4 billion as of December 31, 2023 is included within other non-current assets.

		As of June 30, 2024					
	Fair Value Hierarchy	Adjusted Cost	Gross Unrealized Gains	Gross Unrealized Losses	Fair Value	Cash and Cash Equivalents	Marketable Securities
Fair value changes recorded in other comprehensive income							
Time deposits	Level 2	\$ 2,784	\$ 0	\$ 0	\$ 2,784	\$ 2,784	\$ 0
Government bonds	Level 2	33,002	60	(447)	32,615	5,268	27,347
Corporate debt securities	Level 2	18,856	40	(437)	18,459	0	18,459
Mortgage-backed and asset-backed securities	Level 2	14,806	30	(578)	14,258	0	14,258
Total investments with fair value change reflected in other comprehensive income ⁽¹⁾		<u>\$ 69,448</u>	<u>\$ 130</u>	<u>\$ (1,462)</u>	<u>\$ 68,116</u>	<u>\$ 8,052</u>	<u>\$ 60,064</u>
Fair value adjustments recorded in net income							
Money market funds	Level 1				\$ 7,061	\$ 7,061	\$ 0
Current marketable equity securities ⁽²⁾	Level 1				4,683	0	4,683
Mutual funds	Level 2				276	0	276
Government bonds	Level 2				2,162	152	2,010
Corporate debt securities	Level 2				3,694	89	3,605
Mortgage-backed and asset-backed securities	Level 2				2,862	0	2,862
Total investments with fair value change recorded in net income					<u>\$ 20,738</u>	<u>\$ 7,302</u>	<u>\$ 13,436</u>
Cash					0	11,871	0
Total		<u>\$ 69,448</u>	<u>\$ 130</u>	<u>\$ (1,462)</u>	<u>\$ 88,854</u>	<u>\$ 27,225</u>	<u>\$ 73,500</u>

⁽¹⁾ Represents gross unrealized gains and losses for debt securities recorded to AOCI.

⁽²⁾ The long-term portion of marketable equity securities (subject to long-term lock-up restrictions) of \$276 million as of June 30, 2024 is included within other non-current assets.

Investments Measured at Fair Value on a Nonrecurring Basis

Our non-marketable equity securities are investments in privately held companies without readily determinable market values. The carrying value of our non-marketable equity securities is adjusted to fair value upon observable transactions for identical or similar investments of the same issuer or impairment. Non-marketable equity securities that have been remeasured during the period based on observable transactions are classified within Level 2 or Level 3 in the fair value hierarchy. Non-marketable equity securities that have been remeasured due to impairment are classified within Level 3. Our valuation methods include option pricing models, market comparable approach, and common stock equivalent method, which may include a combination of the observable transaction price at the transaction date and other unobservable inputs including volatility, expected time to exit, risk free rate, and the rights, and obligations of the securities we hold. These inputs significantly vary based on investment type.

As of June 30, 2024, the carrying value of our non-marketable equity securities was \$31.6 billion, of which \$2.2 billion were remeasured at fair value during the three months ended June 30, 2024 and classified within Level 2 and Level 3 of the fair value hierarchy at the time of measurement.

Debt Securities

The following table summarizes the estimated fair value of investments in available-for-sale marketable debt securities by effective contractual maturity dates (in millions):

	As of June 30, 2024
Due in 1 year or less	\$ 7,234
Due in 1 year through 5 years	36,666
Due in 5 years through 10 years	11,977
Due after 10 years	12,664
Total	\$ 68,541

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

	As of December 31, 2023					
	Less than 12 Months		12 Months or Greater		Total	
	Fair Value	Unrealized Loss	Fair Value	Unrealized Loss	Fair Value	Unrealized Loss
Government bonds	\$ 1,456	\$ (22)	\$ 13,897	\$ (657)	\$ 15,353	\$ (679)
Corporate debt securities	827	(5)	15,367	(592)	16,194	(597)
Mortgage-backed and asset-backed securities	2,945	(26)	7,916	(608)	10,861	(634)
Total	\$ 5,228	\$ (53)	\$ 37,180	\$ (1,857)	\$ 42,408	\$ (1,910)

	As of June 30, 2024					
	Less than 12 Months		12 Months or Greater		Total	
	Fair Value	Unrealized Loss	Fair Value	Unrealized Loss	Fair Value	Unrealized Loss
Government bonds	\$ 13,602	\$ (99)	\$ 6,385	\$ (348)	\$ 19,987	\$ (447)
Corporate debt securities	3,456	(8)	10,636	(394)	14,092	(402)
Mortgage-backed and asset-backed securities	4,534	(43)	6,887	(535)	11,421	(578)
Total	\$ 21,592	\$ (150)	\$ 23,908	\$ (1,277)	\$ 45,500	\$ (1,427)

We determine realized gains or losses on the sale or extinguishment of debt securities on a specific identification method. The following table summarizes gains and losses for debt securities, reflected as a component of OI&E (in millions):

	Three Months Ended		Six Months Ended	
	June 30,		June 30,	
	2023	2024	2023	2024
Unrealized gain (loss) on fair value option debt securities	\$ (24)	\$ (23)	\$ 121	\$ (69)
Gross realized gain on debt securities	28	161	85	229
Gross realized loss on debt securities	(303)	(455)	(795)	(935)
(Increase) decrease in allowance for credit losses	(5)	7	(8)	3
Total gain (loss) on debt securities recognized in other income (expense), net	\$ (304)	\$ (310)	\$ (597)	\$ (772)

Equity Investments

The carrying value of equity securities is measured as the total initial cost plus the cumulative net gain (loss). Gains and losses, including impairments, are included as a component of OI&E in the Consolidated Statements of Income. See Note 6 for further details on OI&E.

The carrying values for marketable and non-marketable equity securities are summarized below (in millions):

	As of December 31, 2023			As of June 30, 2024		
	Marketable Equity Securities	Non-Marketable Equity Securities	Total	Marketable Equity Securities	Non-Marketable Equity Securities	Total
Total initial cost	\$ 5,418	\$ 17,616	\$ 23,034	\$ 5,107	\$ 19,219	\$ 24,326
Cumulative net gain (loss) ⁽¹⁾	555	11,150	11,705	128	12,370	12,498
Carrying value	\$ 5,973	\$ 28,766	\$ 34,739	\$ 5,235	\$ 31,589	\$ 36,824

⁽¹⁾ Non-marketable equity securities cumulative net gain (loss) is comprised of \$18.1 billion gains and \$6.9 billion losses (including impairments) as of December 31, 2023 and \$20.6 billion gains and \$8.2 billion losses (including impairments) as of June 30, 2024.

Gains and Losses on Marketable and Non-marketable Equity Securities

Gains and losses (including impairments), net, for marketable and non-marketable equity securities included in OI&E are summarized below (in millions):

	Three Months Ended June 30,		Six Months Ended June 30,	
	2023	2024	2023	2024
Realized net gain (loss) on equity securities sold during the period	\$ 87	\$ 64	\$ 292	\$ 184
Unrealized net gain (loss) on marketable equity securities	397	(350)	349	(214)
Unrealized net gain (loss) on non-marketable equity securities ⁽¹⁾	(689)	(428)	(469)	1,559
Total gain (loss) on equity securities in other income (expense), net	\$ (205)	\$ (714)	\$ 172	\$ 1,529

⁽¹⁾ Unrealized gain (loss) on non-marketable equity securities accounted for under the measurement alternative is comprised of \$75 million and \$319 million of upward adjustments and \$789 million and \$745 million of downward adjustments (including impairments) for the three months ended June 30, 2023 and 2024, respectively, and \$989 million and \$3.1 billion of upward adjustments and \$1.5 billion and \$1.6 billion of downward adjustments (including impairments) for the six months ended June 30, 2023 and 2024, respectively.

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

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

	Equity Securities Sold			
	Three Months Ended June 30,		Six Months Ended June 30,	
	2023	2024	2023	2024
Total sale price	\$ 427	\$ 583	\$ 739	\$ 1,673
Total initial cost	156	303	367	964
Cumulative net gains (losses)	\$ 271	\$ 280	\$ 372	\$ 709

Equity Securities Accounted for Under the Equity Method

As of December 31, 2023 and June 30, 2024, equity securities accounted for under the equity method had a carrying value of approximately \$1.7 billion and \$2.1 billion, respectively. Our share of gains and losses, including impairments, are included as a component of OI&E, in the Consolidated Statements of Income. See Note 6 for further details on OI&E.

Derivative Financial Instruments

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

We recognize derivative instruments in the Consolidated Balance Sheets at fair value and classify the derivatives primarily within Level 2 in the fair value hierarchy. We present our collar contracts (an option strategy comprised of a combination of purchased and written options) at net fair values and present all other derivatives at gross fair values. The accounting treatment for derivatives is based on the intended use and hedge designation.

Cash Flow Hedges

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

Cash flow hedge amounts included in the assessment of hedge effectiveness are deferred in AOCI and subsequently reclassified to revenue when the hedged item is recognized in earnings. We exclude forward points and time value from our assessment of hedge effectiveness and amortize them on a straight-line basis over the life of the hedging instrument in revenues. The difference between fair value changes of the excluded component and the amount amortized to revenues is recorded in AOCI.

As of June 30, 2024, the net accumulated gain on our foreign currency cash flow hedges before tax effect was \$300 million, which is expected to be reclassified from AOCI into revenues within the next 12 months.

Fair Value Hedges

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

Net Investment Hedges

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

Other Derivatives

We enter into foreign currency forward and option contracts that are not designated as hedging instruments to hedge intercompany transactions and other monetary assets or liabilities denominated in currencies other than the functional currency of a subsidiary. Gains and losses on these derivatives that are not designated as accounting hedges are primarily recorded in OI&E along with the foreign currency gains and losses on monetary assets and liabilities.

We also use derivatives not designated as hedging instruments to manage risks relating to interest rates, commodity prices, and credit exposures, and to enhance investment returns. From time to time, we enter into derivatives to hedge the market price risk on certain of our marketable equity securities. Gains and losses arising from other derivatives are primarily reflected within the "other" component of OI&E. See Note 6 for further details.

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

	As of December 31, 2023		As of June 30, 2024	
Derivatives designated as hedging instruments:				
Foreign exchange contracts				
Cash flow hedges	\$	18,039	\$	18,803
Fair value hedges	\$	2,065	\$	1,649
Net investment hedges	\$	9,472	\$	9,355
Derivatives not designated as hedging instruments:				
Foreign exchange contracts	\$	39,722	\$	42,006
Other contracts	\$	10,818	\$	11,542

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

	As of December 31, 2023		As of June 30, 2024	
	Assets ⁽¹⁾	Liabilities ⁽²⁾	Assets ⁽¹⁾	Liabilities ⁽²⁾
Derivatives designated as hedging instruments:				
Foreign exchange contracts	\$ 205	\$ 242	\$ 365	\$ 22
Derivatives not designated as hedging instruments:				
Foreign exchange contracts	134	156	26	171
Other contracts	114	47	172	26
Total derivatives not designated as hedging instruments	248	203	198	197
Total	\$ 453	\$ 445	\$ 563	\$ 219

⁽¹⁾ Derivative assets are recorded as other current and non-current assets in the Consolidated Balance Sheets.

⁽²⁾ Derivative liabilities are recorded as accrued expenses and other liabilities, current and non-current in the Consolidated Balance Sheets.

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):

	Three Months Ended June 30,		Six Months Ended June 30,	
	2023	2024	2023	2024
Derivatives in cash flow hedging relationship:				
Foreign exchange contracts				
Amount included in the assessment of effectiveness	\$ 77	\$ 277	\$ (61)	\$ 432
Amount excluded from the assessment of effectiveness	80	(7)	127	51
Derivatives in net investment hedging relationship:				
Foreign exchange contracts				
Amount included in the assessment of effectiveness	(59)	120	(274)	202
Total	\$ 98	\$ 390	\$ (208)	\$ 685

The table below presents the gains (losses) of our derivatives on the Consolidated Statements of Income: (in millions):

	Gains (Losses) Recognized in Income			
	Three Months Ended June 30,			
	2023		2024	
	Revenues	Other income (expense), net	Revenues	Other income (expense), net
Total amounts in the Consolidated Statements of Income	\$ 74,604	\$ 65	\$ 84,742	\$ 126
Effect of cash flow hedges:				
Foreign exchange contracts				
Amount reclassified from AOCI to income	\$ (2)	\$ 0	\$ 106	\$ 0
Amount excluded from the assessment of effectiveness (amortized)	6	0	(4)	0
Effect of fair value hedges:				
Foreign exchange contracts				
Hedged items	0	22	0	(9)
Derivatives designated as hedging instruments	0	(22)	0	9
Amount excluded from the assessment of effectiveness	0	5	0	3
Effect of net investment hedges:				
Foreign exchange contracts				
Amount excluded from the assessment of effectiveness	0	72	0	31
Effect of non designated hedges:				
Foreign exchange contracts	0	124	0	(22)
Other contracts	0	(4)	0	26
Total gains (losses)	<u>\$ 4</u>	<u>\$ 197</u>	<u>\$ 102</u>	<u>\$ 38</u>

	Gains (Losses) Recognized in Income			
	Six Months Ended June 30,			
	2023		2024	
	Revenues	Other income (expense), net	Revenues	Other income (expense), net
Total amounts in the Consolidated Statements of Income	\$ 144,391	\$ 855	\$ 165,281	\$ 2,969

Effect of cash flow hedges:

Foreign exchange contracts

Amount of gains (losses) reclassified from AOCI to income	\$ 86	\$ 0	\$ 180	\$ 0
Amount excluded from the assessment of effectiveness (amortized)	2	0	(6)	0

Effect of fair value hedges:

Foreign exchange contracts

Hedged items	0	54	0	(25)
Derivatives designated as hedging instruments	0	(54)	0	24
Amount excluded from the assessment of effectiveness	0	10	0	6

Effect of net investment hedges:

Foreign exchange contracts

Amount excluded from the assessment of effectiveness	0	123	0	67
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Effect of non designated hedges:

Foreign exchange contracts	0	154	0	(1)
Other contracts	0	(1)	0	102
Total gains (losses)	<u>\$ 88</u>	<u>\$ 286</u>	<u>\$ 174</u>	<u>\$ 173</u>

Offsetting of Derivatives

We enter into master netting arrangements and collateral security arrangements to reduce credit risk. Cash collateral received related to derivative instruments under our collateral security arrangements are included in other current assets with a corresponding liability. Cash and non-cash collateral pledged related to derivative instruments under our collateral security arrangements are included in other current assets.

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

	As of December 31, 2023					
	Gross Amounts Recognized	Gross Amounts Offset in the Consolidated Balance Sheets	Net Amounts Presented in the Consolidated Balance Sheets	Financial Instruments ⁽¹⁾	Cash and Non-Cash Collateral Received or Pledged	Net Amounts
Derivatives assets	\$ 535	\$ (82)	\$ 453	\$ (213)	\$ (75)	\$ 165
Derivatives liabilities	\$ 527	\$ (82)	\$ 445	\$ (213)	\$ (16)	\$ 216

As of June 30, 2024

	Gross Amounts Recognized	Gross Amounts Offset in the Consolidated Balance Sheets	Net Amounts Presented in the Consolidated Balance Sheets	Gross Amounts Not Offset in the Consolidated Balance Sheets, but Have Legal Rights to Offset		
				Financial Instruments ⁽¹⁾	Cash and Non-Cash Collateral Received or Pledged	Net Amounts
Derivatives assets	\$ 648	\$ (85)	\$ 563	\$ (103)	\$ (268)	\$ 192
Derivatives liabilities	\$ 304	\$ (85)	\$ 219	\$ (103)	\$ (5)	\$ 111

(1) The balances as of December 31, 2023 and June 30, 2024 were related to derivatives allowed to be net settled in accordance with our master netting agreements.

Note 4. Variable Interest Entities (VIE)

Consolidated VIEs

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

For certain consolidated VIEs, their assets are not available to us, and their creditors do not have recourse to us. As of December 31, 2023 and June 30, 2024, assets that can only be used to settle obligations of these VIEs were \$4.9 billion and \$3.7 billion, respectively, and the liabilities for which creditors only have recourse to the VIEs were \$2.5 billion and \$2.3 billion, respectively. We may continue to fund ongoing operations of certain VIEs that are included within Other Bets.

In July 2024, Alphabet committed to fund up to \$5.0 billion for the ongoing operations of Waymo, a fully autonomous driving technology company and a consolidated VIE.

Total noncontrolling interests (NCI) in our consolidated subsidiaries were \$3.4 billion and \$3.3 billion as of December 31, 2023 and June 30, 2024, respectively, of which \$1.1 billion is redeemable noncontrolling interest (RNCI) for both periods. NCI and RNCI are included within additional paid-in capital. Net loss attributable to noncontrolling interests was not material for any period presented and is included within the "other" component of OI&E. See Note 6 for further details on OI&E.

Unconsolidated VIEs

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

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

The maximum exposure of these unconsolidated VIEs is generally based on the current carrying value of the investments and any future funding commitments. The maximum exposure and carrying value of these unconsolidated VIEs were \$5.7 billion and \$4.0 billion, respectively, as of December 31, 2023 and \$6.9 billion and \$5.4 billion, respectively, as of June 30, 2024. The difference between the maximum exposure and the carrying value relates primarily to future funding commitments.

Note 5. Debt

Short-Term Debt

We have a debt financing program of up to \$10.0 billion through the issuance of commercial paper. Net proceeds from this program are used for general corporate purposes. We had no commercial paper outstanding as of December 31, 2023 and June 30, 2024.

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

Long-Term Debt

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

	Maturity	Coupon Rate	Effective Interest Rate	As of December 31, 2023	As of June 30, 2024
Debt					
2016-2020 Notes issuances	2025 - 2060	0.45% - 2.25%	0.57% - 2.33%	\$ 13,000	\$ 12,000
Future finance lease payments, net and other debt ⁽¹⁾				1,746	2,280
Total debt				14,746	14,280
Unamortized discount and debt issuance costs				(130)	(124)
Less: Current portion of long-term notes ⁽²⁾				(1,000)	0
Less: Current portion of future finance lease payments, net and other current debt ⁽¹⁾⁽²⁾				(363)	(918)
Total long-term debt				<u>\$ 13,253</u>	<u>\$ 13,238</u>

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

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

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

The total estimated fair value of the outstanding notes was approximately \$10.3 billion and \$8.9 billion as of December 31, 2023 and June 30, 2024, respectively. The fair value was determined based on observable market prices of identical instruments in less active markets and is categorized accordingly as Level 2 in the fair value hierarchy.

Credit Facility

As of June 30, 2024, we had \$10.0 billion of revolving credit facilities, of which \$4.0 billion expires in April 2025 and \$6.0 billion expires in April 2028. The interest rates for all credit facilities are determined based on a formula using certain market rates, as well as our progress toward the achievement of certain sustainability goals. No amounts were outstanding under the credit facilities as of December 31, 2023 and June 30, 2024.

Note 6. Supplemental Financial Statement Information

Accounts Receivable

The allowance for credit losses on accounts receivable was \$771 million and \$850 million as of December 31, 2023 and June 30, 2024, respectively.

Property and Equipment, Net

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

	As of December 31, 2023	As of June 30, 2024
Land and buildings	\$ 74,083	\$ 78,641
Information technology assets	80,594	91,994
Construction in progress	35,229	40,742
Leasehold improvements	11,425	12,010
Furniture and fixtures	472	584
Property and equipment, gross	201,803	223,971
Less: accumulated depreciation	(67,458)	(72,816)
Property and equipment, net	<u>\$ 134,345</u>	<u>\$ 151,155</u>

Accrued Expenses and Other Current Liabilities

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

	As of December 31, 2023	As of June 30, 2024
European Commission fines ⁽¹⁾	\$ 9,525	\$ 9,376
Accrued purchases of property and equipment	4,679	5,364
Accrued customer liabilities	4,140	3,871
Current operating lease liabilities	2,791	2,855
Income taxes payable, net	2,748	3,297
Other accrued expenses and current liabilities	22,285	22,535
Accrued expenses and other current liabilities	<u>\$ 46,168</u>	<u>\$ 47,298</u>

⁽¹⁾ While each European Commission (EC) decision is under appeal, the fines are included 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. Amounts include the effects of foreign exchange and interest. See Note 8 for further details.

Accumulated Other Comprehensive Income (Loss)

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

	Foreign Currency Translation Adjustments	Unrealized Gains (Losses) on Available- for-Sale Investments	Unrealized Gains (Losses) on Cash Flow Hedges	Total
Balance as of December 31, 2022	\$ (4,142)	\$ (3,477)	\$ 16	\$ (7,603)
Other comprehensive income (loss) before reclassifications	831	296	(50)	1,077
Amounts excluded from the assessment of hedge effectiveness recorded in AOCI	0	0	127	127
Amounts reclassified from AOCI	0	490	(82)	408
Other comprehensive income (loss)	<u>831</u>	<u>786</u>	<u>(5)</u>	<u>1,612</u>
Balance as of June 30, 2023	<u>\$ (3,311)</u>	<u>\$ (2,691)</u>	<u>\$ 11</u>	<u>\$ (5,991)</u>

	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, 2023	\$ (3,407)	\$ (965)	\$ (30)	\$ (4,402)
Other comprehensive income (loss) before reclassifications	(950)	(453)	367	(1,036)
Amounts excluded from the assessment of hedge effectiveness recorded in AOCI	0	0	51	51
Amounts reclassified from AOCI	0	541	(166)	375
Other comprehensive income (loss)	<u>(950)</u>	<u>88</u>	<u>252</u>	<u>(610)</u>
Balance as of June 30, 2024	<u>\$ (4,357)</u>	<u>\$ (877)</u>	<u>\$ 222</u>	<u>\$ (5,012)</u>

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

AOCI Components	Location	Three Months Ended June 30,		Six Months Ended June 30,	
		2023	2024	2023	2024
Unrealized gains (losses) on available-for-sale investments					
	Other income (expense), net	\$ (254)	\$ (295)	\$ (628)	\$ (694)
	Benefit (provision) for income taxes	56	65	138	153
	Net of income tax	(198)	(230)	(490)	(541)
Unrealized gains (losses) on cash flow hedges					
Foreign exchange contracts	Revenue	(2)	106	86	180
Interest rate contracts	Other income (expense), net	1	0	3	1
	Benefit (provision) for income taxes	6	(11)	(7)	(15)
	Net of income tax	5	95	82	166
Total amount reclassified, net of income tax		\$ (193)	\$ (135)	\$ (408)	\$ (375)

Other Income (Expense), Net

Components of OI&E were as follows (in millions):

	Three Months Ended June 30,		Six Months Ended June 30,	
	2023	2024	2023	2024
Interest income	\$ 892	\$ 1,090	\$ 1,689	\$ 2,151
Interest expense ⁽¹⁾	(43)	(67)	(123)	(161)
Foreign currency exchange gain (loss), net	(268)	(173)	(478)	(411)
Gain (loss) on debt securities, net	(304)	(310)	(597)	(772)
Gain (loss) on equity securities, net	(205)	(714)	172	1,529
Performance fees	5	128	123	232
Income (loss) and impairment from equity method investments, net	(106)	32	(157)	6
Other	94	140	226	395
Other income (expense), net	\$ 65	\$ 126	\$ 855	\$ 2,969

⁽¹⁾ Interest expense is net of interest capitalized of \$47 million and \$43 million for the three months ended June 30, 2023 and 2024, respectively, and \$87 million and \$86 million for the six months ended June 30, 2023 and 2024, respectively.

Note 7. Goodwill

Goodwill

Changes in the carrying amount of goodwill for the six months ended June 30, 2024 were as follows (in millions):

	Google Services	Google Cloud	Other Bets	Total
Balance as of December 31, 2023	\$ 21,118	\$ 7,199	\$ 881	\$ 29,198
Acquisitions	31	0	0	31
Foreign currency translation and other adjustments	(39)	(3)	(2)	(44)
Balance as of June 30, 2024	\$ 21,110	\$ 7,196	\$ 879	\$ 29,185

Note 8. Commitments and Contingencies

Commitments

We have content licensing agreements with future fixed or minimum guaranteed commitments of \$9.7 billion as of June 30, 2024, of which the majority is paid quarterly through the first quarter of 2030.

Indemnifications

In the normal course of business, including to facilitate transactions in our services and products and corporate activities, we indemnify certain parties, including advertisers, Google Network partners, distribution partners, customers of Google Cloud offerings, lessors, and service providers with respect to certain matters. We have agreed to defend and/or 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, the payments we have made under such agreements have not had a material adverse effect on our results of operations, cash flows, or financial position. However, to the extent that valid indemnification claims arise in the future, future payments by us could be significant and could have a material adverse effect on our results of operations or cash flows in a particular period.

As of June 30, 2024, we did not have any material indemnification claims that were probable or reasonably possible.

Legal Matters

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.

Certain outstanding matters seek speculative, substantial or indeterminate monetary amounts, substantial changes to our business practices and products, or structural remedies. Significant judgment is required to determine both the likelihood of there being a loss and the estimated amount of a loss related to such matters, and we may be unable to estimate the reasonably possible loss or range of losses. The outcomes of outstanding legal matters are inherently unpredictable and subject to significant uncertainties, and could, either individually or in aggregate, have a material adverse effect.

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

Antitrust Matters

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

- On June 27, 2017, the EC announced its decision that certain actions taken by Google regarding its display and ranking of shopping search results and ads infringed European competition law. The EC decision imposed a €2.4 billion (\$2.7 billion as of June 27, 2017) fine. On September 11, 2017, we appealed the EC decision to the General Court, and on September 27, 2017, we implemented product changes to bring shopping ads into compliance with the EC's decision. We recognized a charge of \$2.7 billion for the fine in the second quarter of 2017. On November 10, 2021, the General Court rejected our appeal, and we subsequently filed an appeal with the European Court of Justice on January 20, 2022.
- On July 18, 2018, the EC announced its decision that certain provisions in Google's Android-related distribution agreements infringed European competition law. The EC decision imposed a €4.3 billion (\$5.1 billion as of June 30, 2018) fine and directed the termination of the conduct at issue. On October 9, 2018, we appealed the EC decision, and on October 29, 2018, we implemented changes to certain of our Android distribution practices. On September 14, 2022, the General Court reduced the fine from €4.3 billion to €4.1 billion. We subsequently filed an appeal with the European Court of Justice. In 2018, we recognized a charge of \$5.1 billion for the fine, which we reduced by \$217 million in 2022.

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

In addition, on July 7, 2021, a number of state Attorneys General filed an antitrust complaint in the U.S. District Court for the Northern District of California, alleging that Google's operation of Android and Google Play violated U.S. antitrust laws and state antitrust and consumer protection laws. In September 2023, we reached a settlement in principle with 50 state Attorneys General and three territories. The U.S. District Court subsequently vacated the trial date with the states, and we expect any final approval of the settlement would come in 2024. In May 2024, we funded the settlement amount to an escrow agent.

In December 2023, a California jury delivered a verdict in a similar lawsuit in *Epic Games v. Google*. The jury found that Google violated antitrust laws related to Google Play's business. Epic did not seek monetary damages. The presiding judge will determine non-monetary remedies in 2024, and the range of potential remedies vary widely. We plan to appeal.

From time to time we are subject to formal and informal inquiries and investigations on various competition matters by regulatory authorities in the U.S., Europe, and other jurisdictions globally. Examples, for which given their nature we cannot estimate a possible loss include:

- In August 2019, we began receiving civil investigative demands from the U.S. Department of Justice (DOJ) requesting information and documents relating to our prior antitrust investigations and certain aspects of our business. The DOJ and a number of state Attorneys General filed a lawsuit in the U.S. District Court for the District of Columbia on October 20, 2020 alleging that Google violated U.S. antitrust laws relating to Search and Search advertising. The trial ended on November 16, 2023, and we expect a decision in 2024. Further, in June 2022, the Australian Competition and Consumer Commission (ACCC) and the United Kingdom's Competition and Markets Authority (CMA) each opened an investigation into Search distribution practices.
- On December 16, 2020, a number of state Attorneys General filed an antitrust complaint in the U.S. District Court for the Eastern District of Texas, alleging that Google violated U.S. antitrust laws as well as state deceptive trade laws relating to its advertising technology, and a trial is scheduled for March 2025. Additionally, on January 24, 2023, the DOJ, along with a number of state Attorneys General, filed an antitrust complaint in the U.S. District Court for the Eastern District of Virginia alleging that Google's digital advertising technology products violate U.S. antitrust laws, and on April 17, 2023, a number of additional state Attorneys General joined the complaint. A trial is scheduled for September 2024. The EC, the CMA, and the ACCC each opened a formal investigation into Google's advertising technology business practices on June 22, 2021, May 25, 2022, and June 29, 2022, respectively. On June 14, 2023, the EC issued a Statement of Objections (SO) informing Google of its preliminary view that Google violated European antitrust laws relating to its advertising technology. We responded to the SO on December 1, 2023.
- In May 2022, the EC and the CMA each opened investigations into Google Play's business practices. Korean regulators are investigating Google Play's billing practices, including a formal review in May 2022 of Google's compliance with the new app store billing regulations.

We believe we have strong arguments against these claims and will defend ourselves vigorously. We continue to cooperate with federal and state regulators in the U.S., the EC, and other regulators around the world.

Privacy Matters

We are subject to a number of privacy-related laws and regulations, and we currently are party to a number of privacy investigations and lawsuits ongoing in multiple jurisdictions. For example, there are ongoing investigations and litigation in the U.S. and the European Union, including those relating to our collection and use of location information, the choices we offer users, and advertising practices, which could result in significant fines, judgments, and product changes.

Patent and Intellectual Property Claims

We have had patent, copyright, trade secret, and trademark infringement lawsuits filed against us claiming that certain of our products, services, and technologies infringe others' intellectual property rights. Adverse results in these lawsuits may include awards of substantial monetary damages, costly royalty or licensing agreements, or orders preventing us from offering certain features, functionalities, products, or services. As a result, we may have to change our business practices and develop non-infringing products or technologies, which could result in a loss

of revenues for us and otherwise harm our business. In addition, the U.S. International Trade Commission (ITC) has increasingly become an important forum to litigate intellectual property disputes because an ultimate loss in an ITC action can result in a prohibition on importing infringing products into the U.S. Because the U.S. is an important market, a prohibition on importation could have an adverse effect on us, including preventing us from importing many important products into the U.S. or necessitating workarounds that may limit certain features of our products.

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

Other

We are subject to claims, lawsuits, regulatory and government investigations, other proceedings, and consent orders involving competition, intellectual property, data security, tax and related compliance, labor and employment, commercial disputes, content generated by our users, goods and services offered by advertisers or publishers using our platforms, personal injury, consumer protection, and other matters. For example, we periodically have data incidents that we report to relevant regulators as required by law. Such claims, consent orders, lawsuits, regulatory and government investigations, and other proceedings could result in substantial fines and penalties, injunctive relief, ongoing monitoring and auditing obligations, changes to our products and services, alterations to our business models and operations, and collateral related civil litigation or other adverse consequences, all of which could harm our business, reputation, financial condition, and operating results.

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

Non-Income Taxes

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

See Note 12 for information regarding income tax contingencies.

Note 9. Stockholders' Equity

Share Repurchases

In the three and six months ended June 30, 2024, we continued to repurchase both Class A and Class C shares in a manner deemed in the best interest of the company and its stockholders, taking into account the economic cost and prevailing market conditions, including the relative trading prices and volumes of the Class A and Class C shares. During the three and six months ended June 30, 2024, we repurchased \$15.6 billion and \$31.7 billion, respectively, of Alphabet's Class A and Class C shares.

In April 2023, the Board of Directors of Alphabet authorized the company to repurchase up to \$70.0 billion of its Class A and Class C shares. In April 2024, the Board of Directors of Alphabet authorized the company to repurchase up to an additional \$70.0 billion of its Class A and Class C shares. As of June 30, 2024, \$74.9 billion remained available for Class A and Class C share repurchases.

The following table presents Class A and Class C shares repurchased and subsequently retired (in millions):

	Three Months Ended June 30, 2024		Six Months Ended June 30, 2024	
	Shares	Amount	Shares	Amount
Class A share repurchases	19	\$ 3,265	43	\$ 6,615
Class C share repurchases	73	12,333	160	25,040
Total share repurchases ⁽¹⁾	92	\$ 15,598	203	\$ 31,655

⁽¹⁾ Shares repurchased include unsettled repurchases as of June 30, 2024.

Repurchases are executed from time to time, subject to general business and market conditions and other investment opportunities, through open market purchases or privately negotiated transactions, including through Rule 10b5-1 plans. The repurchase program does not have an expiration date.

Dividends

On April 25, 2024, the Board of Directors of Alphabet declared a cash dividend of \$0.20 per share to stockholders of record as of June 10, 2024, on each of the company's Class A, Class B, and Class C shares. These dividends were paid on June 17, 2024, totaling to \$1.2 billion, \$173 million, and \$1.1 billion for Class A, Class B, and Class C shares, respectively.

The company intends to pay quarterly cash dividends in the future, subject to review and approval by the company's Board of Directors in its sole discretion.

Note 10. Net Income Per Share

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

	Three Months Ended June 30,							
	2023				2024			
	Class A	Class B	Class C	Consolidated	Class A	Class B	Class C	Consolidated
Basic net income per share:								
Numerator								
Allocation of distributed earnings (cash dividends paid)	\$ 0	\$ 0	\$ 0	\$ 0	\$ 1,173	\$ 173	\$ 1,120	\$ 2,466
Allocation of undistributed earnings	8,600	1,275	8,493	18,368	10,046	1,484	9,623	21,153
Net income	\$ 8,600	\$ 1,275	\$ 8,493	\$ 18,368	\$ 11,219	\$ 1,657	\$ 10,743	\$ 23,619
Denominator								
Number of shares used in per share computation	5,931	879	5,858	12,668	5,862	866	5,615	12,343
Basic net income per share	\$ 1.45	\$ 1.45	\$ 1.45	\$ 1.45	\$ 1.91	\$ 1.91	\$ 1.91	\$ 1.91
Diluted net income per share:								
Numerator								
Allocation of total earnings for basic computation	\$ 8,600	\$ 1,275	\$ 8,493	\$ 18,368	\$ 11,219	\$ 1,657	\$ 10,743	\$ 23,619
Reallocation of total earnings as a result of conversion of Class B to Class A shares	1,275	0	0	⁽¹⁾	1,657	0	0	⁽¹⁾
Reallocation of undistributed earnings	(75)	(10)	75	⁽¹⁾	(140)	(18)	140	⁽¹⁾
Net income	\$ 9,800	\$ 1,265	\$ 8,568	\$ 18,368	\$ 12,736	\$ 1,639	\$ 10,883	\$ 23,619
Denominator								
Number of shares used in basic computation	5,931	879	5,858	12,668	5,862	866	5,615	12,343
Weighted-average effect of dilutive securities								
Add:								
Conversion of Class B to Class A shares outstanding	879	0	0	⁽¹⁾	866	0	0	⁽¹⁾
Restricted stock units and other contingently issuable shares	0	0	96	96	0	0	152	152
Number of shares used in per share computation	6,810	879	5,954	12,764	6,728	866	5,767	12,495
Diluted net income per share	\$ 1.44	\$ 1.44	\$ 1.44	\$ 1.44	\$ 1.89	\$ 1.89	\$ 1.89	\$ 1.89

⁽¹⁾ Not applicable for consolidated net income per share.

Six Months Ended June 30,

	2023				2024			
	Class A	Class B	Class C	Consolidated	Class A	Class B	Class C	Consolidated
Basic net income per share:								
Numerator								
Allocation of distributed earnings (cash dividends paid)	\$ 0	\$ 0	\$ 0	\$ 0	\$ 1,173	\$ 173	\$ 1,120	\$ 2,466
Allocation of undistributed earnings	15,597	2,311	15,511	33,419	21,254	3,142	20,419	44,815
Net income	\$ 15,597	\$ 2,311	\$ 15,511	\$ 33,419	\$ 22,427	\$ 3,315	\$ 21,539	\$ 47,281
Denominator								
Number of shares used in per share computation	5,939	880	5,906	12,725	5,871	868	5,640	12,379
Basic net income per share	\$ 2.63	\$ 2.63	\$ 2.63	\$ 2.63	\$ 3.82	\$ 3.82	\$ 3.82	\$ 3.82
Diluted net income per share:								
Numerator								
Allocation of total earnings for basic computation	\$ 15,597	\$ 2,311	\$ 15,511	\$ 33,419	\$ 22,427	\$ 3,315	\$ 21,539	\$ 47,281
Reallocation of total earnings as a result of conversion of Class B to Class A shares	2,311	0	0	⁽¹⁾	3,315	0	0	⁽¹⁾
Reallocation of undistributed earnings	(96)	(12)	96	⁽¹⁾	(257)	(33)	257	⁽¹⁾
Net income	\$ 17,812	\$ 2,299	\$ 15,607	\$ 33,419	\$ 25,485	\$ 3,282	\$ 21,796	\$ 47,281
Denominator								
Number of shares used in basic computation	5,939	880	5,906	12,725	5,871	868	5,640	12,379
Weighted-average effect of dilutive securities								
Add:								
Conversion of Class B to Class A shares outstanding	880	0	0	⁽¹⁾	868	0	0	⁽¹⁾
Restricted stock units and other contingently issuable shares	0	0	69	69	0	0	132	132
Number of shares used in per share computation	6,819	880	5,975	12,794	6,739	868	5,772	12,511
Diluted net income per share	\$ 2.61	\$ 2.61	\$ 2.61	\$ 2.61	\$ 3.78	\$ 3.78	\$ 3.78	\$ 3.78

⁽¹⁾ Not applicable for consolidated net income per share.

For the periods presented above, 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. Holders of Alphabet unvested stock units are awarded dividend equivalents, which are subject to the same vesting conditions as the underlying award, and settled in Class C shares.

Note 11. Compensation Plans

Stock-Based Compensation

For the three months ended June 30, 2023 and 2024, total stock based compensation (SBC) expense was \$5.4 billion and \$5.9 billion, including amounts associated with awards we expect to settle in Alphabet stock of \$5.6 billion and \$5.7 billion, respectively. For the six months ended June 30, 2023 and 2024, total SBC expense was \$10.7 billion and \$11.2 billion, including amounts associated with awards we expect to settle in Alphabet stock of \$10.7 billion and \$10.7 billion, respectively.

Stock-Based Award Activities

The following table summarizes the activities for unvested Alphabet restricted stock units (RSUs), which include dividend equivalents awarded to holders of unvested stock, for the six months ended June 30, 2024 (in millions, except per share amounts):

	Number of Shares	Weighted-Average Grant-Date Fair Value
Unvested as of December 31, 2023	338	\$ 104.93
Granted	169	\$ 135.64
Vested	(101)	\$ 109.05
Forfeited/canceled	(19)	\$ 109.92
Unvested as of June 30, 2024	387	\$ 117.01

As of June 30, 2024, there was \$43.9 billion of unrecognized compensation cost related to unvested RSUs. This amount is expected to be recognized over a weighted-average period of 2.7 years.

Note 12. Income Taxes

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

	Three Months Ended June 30,		Six Months Ended June 30,	
	2023	2024	2023	2024
Income before provision for income taxes	\$ 21,903	\$ 27,551	\$ 40,108	\$ 55,866
Provision for income taxes	\$ 3,535	\$ 3,932	\$ 6,689	\$ 8,585
Effective tax rate	16.1 %	14.3 %	16.7 %	15.4 %

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. The total amount of gross unrecognized tax benefits was \$9.4 billion and \$10.7 billion, of which \$7.4 billion and \$8.6 billion, if recognized, would affect our effective tax rate, as of December 31, 2023 and June 30, 2024, respectively.

Note 13. Information about Segments and Geographic Areas

We report our segment results as Google Services, Google Cloud, and Other Bets:

- Google Services includes products and services such as ads, Android, Chrome, devices, Google Maps, Google Play, Search, and YouTube. Google Services generates revenues primarily from advertising; fees received for consumer subscription-based products such as YouTube TV, YouTube Music and Premium, and NFL Sunday Ticket, as well as Google One; the sale of apps and in-app purchases and devices.
- Google Cloud includes infrastructure and platform services, collaboration tools, and other services for enterprise customers. Google Cloud generates revenues primarily from consumption-based fees and subscriptions received for Google Cloud Platform services, Google Workspace communication and collaboration tools, and other enterprise services.
- Other Bets is a combination of multiple operating segments that are not individually material. Revenues from Other Bets are generated primarily from the sale of healthcare-related services and internet services.

Revenues, certain costs, such as costs associated with content and traffic acquisition, certain engineering activities, and devices, as well as certain operating expenses are directly attributable to our segments. Due to the integrated nature of Alphabet, other costs and expenses, such as technical infrastructure and office facilities, are

managed centrally at a consolidated level. These costs, including the associated depreciation and impairment, are allocated to operating segments as a service cost generally based on usage, headcount, or revenue.

As announced on April 18, 2024, we further consolidated teams that focus on building AI models across Google Research and Google DeepMind to further accelerate our progress in AI. AI model development teams previously under Google Research in our Google Services segment are included as part of Google DeepMind, reported within Alphabet-level activities, prospectively beginning in the second quarter of 2024.

Certain costs are not allocated to our segments because they represent Alphabet-level activities. These costs primarily include AI-focused shared R&D activities, including development costs of our general AI models; corporate initiatives such as our philanthropic activities; corporate shared costs such as certain finance, human resource, and legal costs, including certain fines and settlements. Charges associated with employee severance and office space reductions during 2023 and employee severance in 2024 were also not allocated to our segments. Additionally, hedging gains (losses) related to revenue are not allocated to our segments.

Our operating segments are not evaluated using asset information.

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

	Three Months Ended		Six Months Ended	
	June 30,		June 30,	
	2023	2024	2023	2024
Revenues:				
Google Services	\$ 66,285	\$ 73,928	\$ 128,246	\$ 144,326
Google Cloud	8,031	10,347	15,485	19,921
Other Bets	285	365	573	860
Hedging gains (losses)	3	102	87	174
Total revenues	<u>\$ 74,604</u>	<u>\$ 84,742</u>	<u>\$ 144,391</u>	<u>\$ 165,281</u>
Operating income (loss):				
Google Services	\$ 23,454	\$ 29,674	\$ 45,191	\$ 57,571
Google Cloud	395	1,172	586	2,072
Other Bets	(813)	(1,134)	(2,038)	(2,154)
Alphabet-level activities	(1,198)	(2,287)	(4,486)	(4,592)
Total income from operations	<u>\$ 21,838</u>	<u>\$ 27,425</u>	<u>\$ 39,253</u>	<u>\$ 52,897</u>

See Note 2 for information relating to revenues by geography.

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

	As of December 31, 2023	As of June 30, 2024
Long-lived assets:		
United States	\$ 110,053	\$ 122,463
International	38,383	42,298
Total long-lived assets	<u>\$ 148,436</u>	<u>\$ 164,761</u>

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

Please read the following discussion and analysis of our financial condition and results of operations together with "Note About Forward-Looking Statements" and our consolidated financial statements and related notes included under Item 1 of this Quarterly Report on Form 10-Q as well as our Annual Report on Form 10-K for the fiscal year ended December 31, 2023, including Part I, Item 1A "Risk Factors," as updated in our Quarterly Report on Form 10-Q for the quarter ended March 31, 2024 and in this Quarterly Report on Form 10-Q.

Understanding Alphabet's Financial Results

Alphabet is a collection of businesses — the largest of which is Google. We report Google in two segments, Google Services and Google Cloud; we also report all non-Google businesses collectively as Other Bets. For further details on our segments, see Note 13 of the Notes to Consolidated Financial Statements included in Item 1 of this Quarterly Report on Form 10-Q.

Revenues and Monetization Metrics

We generate revenues by delivering relevant, cost-effective online advertising; cloud-based solutions that provide enterprise customers of all sizes with infrastructure and platform services as well as communication and collaboration tools; sales of other products and services, such as fees received for subscription-based products, apps and in-app purchases, and devices. For additional information on how we recognize revenue, see Note 1 of the Notes to Consolidated Financial Statements included in Part II, Item 8 in our Annual Report on Form 10-K for the fiscal year ended December 31, 2023.

In addition to the long-term trends and their financial effect on our business discussed in "Trends in Our Business and Financial Effect" in Part II, Item 7 of our Annual Report on Form 10-K for the fiscal year ended December 31, 2023, fluctuations in our revenues have been and may continue to be affected by a combination of factors, including:

- changes in foreign currency exchange rates;
- changes in pricing, such as those resulting from changes in fee structures, discounts, and customer incentives;
- general economic conditions and various external dynamics, including geopolitical events, regulations, and other measures and their effect on advertiser, consumer, and enterprise spending;
- new product and service launches; and
- seasonality.

Additionally, fluctuations in our revenues generated from advertising ("Google advertising"), revenues from other sources ("Google subscriptions, platforms, and devices revenues"), Google Cloud, and Other Bets revenues have been, and may continue to be, affected by other factors unique to each set of revenues, as described below.

Google Services

Google Services revenues consist of Google advertising as well as Google subscriptions, platforms, and devices revenues.

Google Advertising

Google advertising revenues are comprised of the following:

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

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

Paid clicks represent engagement by users and include clicks on advertisements by end-users on Google search properties and other Google owned and operated properties including Gmail, Google Maps, and Google Play. Cost-per-click is defined as click-driven revenues divided by our total number of paid clicks and represents the average amount we charge advertisers for each engagement by users.

Impressions include impressions displayed to users on Google Network properties participating primarily in AdMob, AdSense, and Google Ad Manager. Cost-per-impression is defined as impression-based and click-based revenues divided by our total number of impressions, and represents the average amount we charge advertisers for each impression displayed to users.

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

Fluctuations in our advertising revenues, as well as the change in paid clicks and cost-per-click on Google Search & other properties and the change in impressions and cost-per-impression on Google Network properties and the correlation between these items have been, and may continue to be, affected by factors in addition to the general factors described above, such as:

- advertiser competition for keywords;
- changes in advertising quality, formats, delivery or policy;
- changes in device mix;
- seasonal fluctuations in internet usage, advertising expenditures, and underlying business trends, such as traditional retail seasonality; and
- traffic growth in emerging markets compared to more mature markets and across various verticals and channels.

Google subscriptions, platforms, and devices

Google subscriptions, platforms, and devices revenues are comprised of the following:

- consumer subscriptions, which primarily include revenues from YouTube services, such as YouTube TV, YouTube Music and Premium, and NFL Sunday Ticket, as well as Google One;
- platforms, which primarily include revenues from Google Play from the sales of apps and in-app purchases;
- devices, which primarily include sales of the Pixel family of devices; and
- other products and services.

Fluctuations in our Google subscriptions, platforms, and devices revenues have been, and may continue to be, affected by factors in addition to the general factors described above, such as changes in customer usage and demand, number of subscribers, and fluctuations in the timing of product launches.

Google Cloud

Google Cloud revenues are comprised of the following:

- Google Cloud Platform, which generates consumption-based fees and subscriptions for infrastructure, platform, and other services. These services provide access to solutions such as cybersecurity, databases, analytics, and AI offerings including our AI infrastructure, Vertex AI platform, and Gemini for Google Cloud;
- Google Workspace, which includes subscriptions for cloud-based communication and collaboration tools for enterprises, such as Calendar, Gmail, Docs, Drive, and Meet, with integrated features like Gemini for Google Workspace; and
- other enterprise services.

Fluctuations in our Google Cloud revenues have been, and may continue to be, affected by factors in addition to the general factors described above, such as customer usage.

Other Bets

Revenues from Other Bets are generated primarily from the sale of healthcare-related services and internet services.

Costs and Expenses

Our cost structure has two components: cost of revenues and operating expenses. Our operating expenses include costs related to R&D, sales and marketing, and general and administrative functions. Certain of our costs and expenses, including those associated with the operation of our technical infrastructure as well as components of our operating expenses, are generally less variable in nature and may not correlate to changes in revenue. Additionally, fluctuations in compensation expenses may not directly correlate with changes in headcount, in particular due to annual SBC awards that generally vest over four years.

Cost of Revenues

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

- TAC includes:
 - amounts paid to our distribution partners who make available our search access points and services. Our distribution partners include browser providers, mobile carriers, original equipment manufacturers, and software developers; and
 - amounts paid to Google Network partners primarily for ads displayed on their properties.
- Other cost of revenues primarily includes:
 - compensation expense related to our technical infrastructure and other operations such as content review and customer and product support;
 - content acquisition costs, which are payments to content providers from whom we license video and other content for distribution on YouTube and Google Play (we pay fees to these content providers based on revenues generated or a flat fee);
 - depreciation expense related to our technical infrastructure;
 - inventory and other costs related to the devices we sell; and
 - other technical infrastructure operations costs, including bandwidth, energy, and equipment costs.

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

Operating Expenses

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

The main components of our R&D expenses are:

- compensation expenses for engineering and technical employees responsible for R&D related to our existing and new products and services;
- depreciation; and
- third-party services fees primarily relating to consulting and outsourced services in support of our engineering and product development efforts.

The main components of our sales and marketing expenses are:

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

The main components of our general and administrative expenses are:

- compensation expenses for employees in finance, human resources, information technology, legal, and other administrative support functions;
- expenses relating to legal matters, including certain fines and settlements; and
- third-party services fees, including audit, consulting, outside legal, and other outsourced administrative services.

Other Income (Expense), Net

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

For additional information, including how we account for our investments and factors that can drive fluctuations in the value of our investments, see Note 1 of the Notes to Consolidated Financial Statements included in Part II, Item 8 and Item 7A, "Quantitative and Qualitative Disclosures About Market Risk" in our Annual Report on Form 10-K for the fiscal year ended December 31, 2023 as well as Note 3 of the Notes to Consolidated Financial Statements included in Item 1 of this Quarterly Report on Form 10-Q.

Provision for Income Taxes

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

For additional information, see Note 1 of the Notes to Consolidated Financial Statements included in Part II, Item 8 in our Annual Report on Form 10-K for the fiscal year ended December 31, 2023 as well as Note 12 of the Notes to Consolidated Financial Statements included in Item 1 of this Quarterly Report on Form 10-Q.

Executive Overview

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

	Three Months Ended		\$ Change	% Change
	June 30,			
	2023	2024		
Consolidated revenues	\$ 74,604	\$ 84,742	\$ 10,138	14 %
Change in consolidated constant currency revenues ⁽¹⁾				15 %
Cost of revenues	\$ 31,916	\$ 35,507	\$ 3,591	11 %
Operating expenses	\$ 20,850	\$ 21,810	\$ 960	5 %
Operating income	\$ 21,838	\$ 27,425	\$ 5,587	26 %
Operating margin	29 %	32 %		3 %
Other income (expense), net	\$ 65	\$ 126	\$ 61	94 %
Net Income	\$ 18,368	\$ 23,619	\$ 5,251	29 %
Diluted EPS ⁽²⁾	\$ 1.44	\$ 1.89	\$ 0.45	31 %

⁽¹⁾ See "Use of Non-GAAP Constant Currency Measures" below for details relating to our use of constant currency information.

⁽²⁾ For additional information on the calculation of diluted EPS, see Note 10 of the Notes to Consolidated Financial Statements included in Item 1 of this Quarterly Report on Form 10-Q.

- Revenues were \$84.7 billion, an increase of 14% year over year, primarily driven by an increase in Google Services revenues of \$7.6 billion, or 12%, and an increase in Google Cloud revenues of \$2.3 billion, or 29%.
- Total constant currency revenues, which exclude the effect of hedging, increased 15% year over year.
- Cost of revenues was \$35.5 billion, an increase of 11% year over year, primarily driven by increases in content acquisition costs, TAC, depreciation expense, digital services tax related to the recently enacted law in Canada, which is applied retroactively, and other technical infrastructure operations costs.
- Operating expenses were \$21.8 billion, an increase of 5% year over year, primarily driven by increases in compensation expenses, depreciation expense, and third-party services fees. The increase in compensation expenses was largely due to an increase in SBC expenses, which primarily reflects the

reduction in valuation-based compensation liabilities related to certain Other Bets recognized in the prior year comparable period. These increases were partially offset by a reduction in charges related to legal matters.

Other Information

- Dividend payments to stockholders of Class A, Class B, and Class C shares were \$1.2 billion, \$173 million, and \$1.1 billion, respectively, totaling \$2.5 billion for the three months ended June 30, 2024. On July 23, 2024, Alphabet announced a cash dividend of \$0.20 per share that will be paid on September 16, 2024, to stockholders of record as of September 9, 2024, on each of the company's Class A, Class B, and Class C shares. For additional information, see Note 9 of the Notes to Consolidated Financial Statements included in Item 1 of this Quarterly Report on Form 10-Q.
- Repurchases of Class A and Class C shares were \$3.3 billion and \$12.3 billion, respectively, totaling \$15.6 billion for the three months ended June 30, 2024. For additional information, see Note 9 of the Notes to Consolidated Financial Statements included in Item 1 of this Quarterly Report on Form 10-Q.
- Operating cash flow was \$26.6 billion for the three months ended June 30, 2024.
- Capital expenditures, which primarily reflected investments in technical infrastructure, were \$13.2 billion for the three months ended June 30, 2024.
- As of June 30, 2024, we had 179,582 employees.

Financial Results

Revenues

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

	Three Months Ended June 30,		Six Months Ended June 30,	
	2023	2024	2023	2024
Google Search & other	\$ 42,628	\$ 48,509	\$ 82,987	\$ 94,665
YouTube ads	7,665	8,663	14,358	16,753
Google Network	7,850	7,444	15,346	14,857
Google advertising	58,143	64,616	112,691	126,275
Google subscriptions, platforms, and devices	8,142	9,312	15,555	18,051
Google Services total	66,285	73,928	128,246	144,326
Google Cloud	8,031	10,347	15,485	19,921
Other Bets	285	365	573	860
Hedging gains (losses)	3	102	87	174
Total revenues	\$ 74,604	\$ 84,742	\$ 144,391	\$ 165,281

Google Services

Google advertising revenues

Google Search & other

Google Search & other revenues increased \$5.9 billion and \$11.7 billion from the three and six months ended June 30, 2023 to the three and six months ended June 30, 2024, respectively. The overall growth was driven by interrelated factors including increases in search queries resulting from growth in user adoption and usage on mobile devices; growth in advertiser spending; and improvements we have made in ad formats and delivery.

YouTube ads

YouTube ads revenues increased \$998 million and \$2.4 billion from the three and six months ended June 30, 2023 to the three and six months ended June 30, 2024, respectively. The growth was driven by our brand advertising products followed by our direct response advertising products, both of which benefited from increased spending by our advertisers.

Google Network

Google Network revenues decreased \$406 million from the three months ended June 30, 2023 to the three months ended June 30, 2024, primarily driven by a decrease in AdMob revenues. Additionally, Google Network revenues were adversely affected by changes in foreign currency exchange rates for the three months ended June 30, 2024.

Google Network revenues decreased \$489 million from the six months ended June 30, 2023 to the six months ended June 30, 2024 primarily driven by a decrease in AdSense revenues. Additionally, Google Network revenues were adversely affected by changes in foreign currency exchange rates for the six months ended June 30, 2024.

Monetization Metrics

The following table presents changes in monetization metrics for Google Search & other revenues (paid clicks and cost-per-click) and Google Network revenues (impressions and cost-per-impression), expressed as a percentage, from three and six months ended June 30, 2023 to three and six months ended June 30, 2024:

	Three Months Ended June 30, 2024	Six Months Ended June 30, 2024
Google Search & other		
Paid clicks change	6 %	5 %
Cost-per-click change	7 %	8 %
Google Network		
Impressions change	(17)%	(15)%
Cost-per-impression change	13 %	14 %

Changes in paid clicks and impressions are driven by a number of interrelated factors, including changes in advertiser spending; ongoing product and policy changes; and, as it relates to paid clicks, fluctuations in search queries resulting from changes in user adoption and usage, primarily on mobile devices.

Changes in cost-per-click and cost-per-impression are driven by a number of interrelated factors including changes in device mix, geographic mix, advertiser spending, ongoing product and policy changes, product mix, property mix, and changes in foreign currency exchange rates.

Google subscriptions, platforms, and devices

Google subscriptions, platforms, and devices revenues increased \$1.2 billion and \$2.5 billion from the three and six months ended June 30, 2023 to the three and six months ended June 30, 2024, respectively. The growth was primarily driven by an increase in subscription revenues, largely from growth in the number of paid subscribers for YouTube services.

Google Cloud

Google Cloud revenues increased \$2.3 billion and \$4.4 billion from the three and six months ended June 30, 2023 to the three and six months ended June 30, 2024, respectively. The growth was primarily driven by Google Cloud Platform followed by Google Workspace offerings. Google Cloud's infrastructure and platform services were the largest drivers of growth in Google Cloud Platform.

Revenues by Geography

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

	Three Months Ended June 30,		Six Months Ended June 30,	
	2023	2024	2023	2024
United States	47 %	49 %	47 %	48 %
EMEA	30 %	29 %	30 %	29 %
APAC	17 %	16 %	17 %	17 %
Other Americas	6 %	6 %	6 %	6 %
Hedging gains (losses)	0 %	0 %	0 %	0 %

For additional information, see Note 2 of the Notes to Consolidated Financial Statements included in Item 1 of this Quarterly Report on Form 10-Q.

Use of Non-GAAP Constant Currency Information

International revenues, which represent a significant portion of our revenues, are generally transacted in multiple currencies and therefore are affected by fluctuations in foreign currency exchange rates.

The effect of currency exchange rates on our business is an important factor in understanding period-to-period comparisons. We use non-GAAP constant currency revenues ("constant currency revenues") and non-GAAP percentage change in constant currency revenues ("percentage change in constant currency revenues") for financial and operational decision-making and as a means to evaluate period-to-period comparisons. We believe the presentation of results on a constant currency basis in addition to GAAP results helps improve the ability to understand our performance, because it excludes the effects of foreign currency volatility that are not indicative of our core operating results.

Constant currency information compares results between periods as if exchange rates had remained constant period over period. We define constant currency revenues as revenues excluding the effect of foreign currency exchange rate movements ("FX Effect") as well as hedging activities, which are recognized at the consolidated level. We use constant currency revenues to determine the constant currency revenue percentage change on a year-on-year basis. Constant currency revenues are calculated by translating current period revenues using prior year comparable period exchange rates, as well as excluding any hedging effects realized in the current period.

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

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

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

	Three Months Ended June 30, 2024							
	Three Months Ended June 30,		% Change from Prior Period					
	2023	2024	Less FX Effect	Constant Currency Revenues	As Reported	Less Hedging Effect	Less FX Effect	Constant Currency Revenues
United States	\$ 35,073	\$ 41,196	\$ 0	\$ 41,196	17 %		0 %	17 %
EMEA	22,289	24,683	(367)	25,050	11 %		(1)%	12 %
APAC	12,728	13,823	(595)	14,418	9 %		(4)%	13 %
Other Americas	4,511	4,938	(305)	5,243	9 %		(7)%	16 %
Revenues, excluding hedging effect	74,601	84,640	(1,267)	85,907	13 %		(2)%	15 %
Hedging gains (losses)	3	102						
Total revenues ⁽¹⁾	<u>\$ 74,604</u>	<u>\$ 84,742</u>		<u>\$ 85,907</u>	14 %	1 %	(2)%	15 %

⁽¹⁾ Total constant currency revenues of \$85.9 billion for the three months ended June 30, 2024 increased \$11.3 billion compared to \$74.6 billion in revenues, excluding hedging effect, for the three months ended June 30, 2023.

EMEA revenue growth was unfavorably affected by changes in foreign currency exchange rates, primarily due to the U.S. dollar strengthening relative to the Turkish lira.

APAC revenue growth was unfavorably affected by changes in foreign currency exchange rates, primarily due to the U.S. dollar strengthening relative to the Japanese yen.

Other Americas revenue growth was unfavorably affected by changes in foreign currency exchange rates, primarily due to the U.S. dollar strengthening relative to the Argentine peso.

	Six Months Ended June 30, 2024							
	Six Months Ended June 30,		% Change from Prior Period					
	2023	2024	Less FX Effect	Constant Currency Revenues	As Reported	Less Hedging Effect	Less FX Effect	Constant Currency Revenues
United States	\$ 67,937	\$ 79,933	\$ 0	\$ 79,933	18 %		0 %	18 %
EMEA	43,367	48,471	(163)	48,634	12 %		0 %	12 %
APAC	24,409	27,112	(1,034)	28,146	11 %		(4)%	15 %
Other Americas	8,591	9,591	(457)	10,048	12 %		(5)%	17 %
Revenues, excluding hedging effect	144,304	165,107	(1,654)	166,761	14 %		(2)%	16 %
Hedging gains (losses)	87	174						
Total revenues ⁽¹⁾	\$ 144,391	\$ 165,281		\$ 166,761	14 %	0 %	(2)%	16 %

⁽¹⁾ Total constant currency revenues of \$166.8 billion for the six months ended June 30, 2024 increased \$22.5 billion compared to \$144.4 billion in revenues, excluding hedging effect, for the six months ended June 30, 2023.

EMEA revenue growth was not materially affected by changes in foreign currency exchange rates, as the effect of the U.S. dollar strengthening relative to the Turkish lira was largely offset by the U.S. dollar weakening relative to the British pound and the Euro.

APAC revenue growth was unfavorably affected by changes in foreign currency exchange rates, primarily due to the U.S. dollar strengthening relative to the Japanese yen.

Other Americas revenue growth was unfavorably affected by changes in foreign currency exchange rates, primarily due to the U.S. dollar strengthening relative to the Argentine peso.

Costs and Expenses

Cost of Revenues

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

	Three Months Ended June 30,		Six Months Ended June 30,	
	2023	2024	2023	2024
TAC	\$ 12,537	\$ 13,387	\$ 24,258	\$ 26,333
Other cost of revenues	19,379	22,120	38,270	42,886
Total cost of revenues	\$ 31,916	\$ 35,507	\$ 62,528	\$ 69,219
Total cost of revenues as a percentage of revenues	43 %	42 %	43 %	42 %

Cost of revenues increased \$3.6 billion from the three months ended June 30, 2023 to the three months ended June 30, 2024 due to an increase in other cost of revenues and TAC of \$2.7 billion and \$850 million, respectively. Cost of revenues increased \$6.7 billion from the six months ended June 30, 2023 to the six months ended June 30, 2024 due to an increase in other cost of revenues and TAC of \$4.6 billion and \$2.1 billion, respectively.

The increase in TAC from the three and six months ended June 30, 2023 to the three and six months ended June 30, 2024 was largely due to an increase in TAC paid to distribution partners, primarily driven by growth in revenues subject to TAC. The TAC rate decreased from 21.6% to 20.7% from the three months ended June 30, 2023 to the three months ended June 30, 2024 and decreased from 21.5% to 20.9% from the six months ended June 30, 2023 to the six months ended June 30, 2024, primarily due to a revenue mix shift from Google Network properties to Google Search & other properties. The TAC rate on Google Search & other revenues was substantially consistent from the three and six months ended June 30, 2023 to the three and six months ended June 30, 2024. The TAC rate on Google Network revenues was substantially consistent from the three months ended June 30, 2023 to the three months ended June 30, 2024 and reflected a slight increase from the six months ended June 30, 2023 to the six months ended June 30, 2024 due to a combination of factors, none of which were individually significant.

The increase in other cost of revenues from the three and six months ended June 30, 2023 to the three and six months ended June 30, 2024 was primarily due to increases in content acquisition costs, largely for YouTube, depreciation expense, digital services tax related to the recently enacted law in Canada, which is applied retroactively, and other technical infrastructure operations costs. Additionally, an increase in third-party service fees

contributed to the increase in other cost of revenues from the six months ended June 30, 2023 to the six months ended June 30, 2024.

Research and Development

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

	Three Months Ended June 30,		Six Months Ended June 30,	
	2023	2024	2023	2024
Research and development expenses	\$ 10,588	\$ 11,860	\$ 22,056	\$ 23,763
Research and development expenses as a percentage of revenues	14 %	14 %	15 %	14 %

R&D expenses increased \$1.3 billion from the three months ended June 30, 2023 to the three months ended June 30, 2024, primarily driven by increases in compensation expenses of \$585 million, depreciation expense of \$331 million, and third-party services fees of \$219 million. The increase in compensation expenses was largely due to an increase in SBC expenses of \$471 million, which primarily reflects the reduction in valuation-based compensation liabilities related to certain Other Bets recognized in the prior year comparable period.

R&D expenses increased \$1.7 billion from the six months ended June 30, 2023 to the six months ended June 30, 2024, primarily driven by increases in depreciation expense of \$640 million, compensation expenses of \$522 million, and third-party services fees of \$472 million. The increase in compensation expenses was primarily related to an increase in SBC expenses of \$790 million, excluding employee severance and related charges, and reflects the reduction in valuation-based compensation liabilities related to certain Other Bets recognized in the prior year comparable period. The increase in compensation expenses is partially offset by a reduction in employee severance and related charges of \$569 million.

Sales and Marketing

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

	Three Months Ended June 30,		Six Months Ended June 30,	
	2023	2024	2023	2024
Sales and marketing expenses	\$ 6,781	\$ 6,792	\$ 13,314	\$ 13,218
Sales and marketing expenses as a percentage of revenues	9 %	8 %	9 %	8 %

Sales and marketing expenses increased \$11 million from the three months ended June 30, 2023 to the three months ended June 30, 2024, and decreased \$96 million from the six months ended June 30, 2023 to the six months ended June 30, 2024, due to a combination of factors, none of which were individually significant.

General and Administrative

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

	Three Months Ended June 30,		Six Months Ended June 30,	
	2023	2024	2023	2024
General and administrative expenses	\$ 3,481	\$ 3,158	\$ 7,240	\$ 6,184
General and administrative expenses as a percentage of revenues	5 %	4 %	5 %	4 %

General and administrative expenses decreased \$323 million and \$1.1 billion from the three and six months ended June 30, 2023 to the three and six months ended June 30, 2024, primarily driven by a reduction in charges related to legal matters of \$471 million and \$718 million, respectively, as well as a combination of factors, none of which were individually significant.

Segment Profitability

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

	Three Months Ended June 30,		Six Months Ended June 30,	
	2023	2024	2023	2024
Operating income (loss):				
Google Services	\$ 23,454	\$ 29,674	\$ 45,191	\$ 57,571
Google Cloud	395	1,172	586	2,072
Other Bets	(813)	(1,134)	(2,038)	(2,154)
Alphabet-level activities ⁽¹⁾	(1,198)	(2,287)	(4,486)	(4,592)
Total income from operations	<u>\$ 21,838</u>	<u>\$ 27,425</u>	<u>\$ 39,253</u>	<u>\$ 52,897</u>

⁽¹⁾ In addition to the costs included in Alphabet-level activities, hedging gains (losses) related to revenue were \$3 million and \$102 million for the three months ended June 30, 2023 and 2024, respectively, and \$87 million and \$174 million for the six months ended June 30, 2023 and 2024, respectively. For the three and six months ended June 30, 2023 and 2024, Alphabet-level activities included substantially all of the charges related to employee severance and our office space optimization efforts. For additional information relating to our segments, see Note 13 of the Notes to Consolidated Financial Statements included in Item 1 of this Quarterly Report on Form 10-Q.

Google Services

Google Services operating income increased \$6.2 billion from the three months ended June 30, 2023 to the three months ended June 30, 2024. The increase in operating income was primarily driven by an increase in revenues, partially offset by increases in content acquisition costs and TAC. Additionally, a reduction in compensation expenses contributed to the increase in operating income.

Google Services operating income increased \$12.4 billion from the six months ended June 30, 2023 to the six months ended June 30, 2024. The increase in operating income was primarily driven by an increase in revenues, partially offset by increases in TAC and content acquisition costs. Additionally, a reduction in compensation expenses contributed to the increase in operating income.

Google Cloud

Google Cloud operating income increased \$777 million and \$1.5 billion from the three and six months ended June 30, 2023 to the three and six months ended June 30, 2024, respectively. The increase in operating income was primarily driven by an increase in revenues, partially offset by increases in usage costs for technical infrastructure assets as well as compensation expenses, largely driven by headcount growth.

Other Bets

Other Bets operating loss increased \$321 million and \$116 million from the three and six months ended June 30, 2023 to the three and six months ended June 30, 2024, respectively. The increase in operating loss was primarily due to an increase in compensation expenses as a result of the reduction in valuation-based compensation liabilities related to certain Other Bets recognized in the prior year comparable period. Additionally, growth in revenues partially offset the increase in operating loss from the six months ended June 30, 2023 to the six months ended June 30, 2024.

Other Income (Expense), Net

The following table presents OI&E (in millions):

	Three Months Ended June 30,		Six Months Ended June 30,	
	2023	2024	2023	2024
Interest income	\$ 892	\$ 1,090	\$ 1,689	\$ 2,151
Interest expense	(43)	(67)	(123)	(161)
Foreign currency exchange gain (loss), net	(268)	(173)	(478)	(411)
Gain (loss) on debt securities, net	(304)	(310)	(597)	(772)
Gain (loss) on equity securities, net	(205)	(714)	172	1,529
Performance fees	5	128	123	232
Income (loss) and impairment from equity method investments, net	(106)	32	(157)	6
Other	94	140	226	395
Other income (expense), net	\$ 65	\$ 126	\$ 855	\$ 2,969

OI&E increased \$61 million from the three months ended June 30, 2023 to the three months ended June 30, 2024. Net unrealized losses in marketable equity securities reflecting market driven changes were offset by a decrease in unrealized losses on non-marketable equity securities from fair value adjustments related to observable transactions and increased interest income related to higher interest rates.

OI&E increased \$2.1 billion from the six months ended June 30, 2023 to the six months ended June 30, 2024. The increase was primarily due to an increase in net unrealized gains on non-marketable equity securities driven by fair value adjustments related to observable transactions and increased interest income related to higher interest rates. The increases were partially offset by net unrealized losses in marketable equity securities reflecting market driven changes.

For additional information, see Note 6 of the Notes to Consolidated Financial Statements included in Item 1 of this Quarterly Report on Form 10-Q for further information.

Provision for Income Taxes

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

	Three Months Ended June 30,		Six Months Ended June 30,	
	2023	2024	2023	2024
Income before provision for income taxes	\$ 21,903	\$ 27,551	\$ 40,108	\$ 55,866
Provision for income taxes	\$ 3,535	\$ 3,932	\$ 6,689	\$ 8,585
Effective tax rate	16.1 %	14.3 %	16.7 %	15.4 %

The effective tax rate decreased from the three and six months ended June 30, 2023 to the three and six months ended June 30, 2024, primarily due to the tax rule change related to U.S. federal foreign tax credits issued by the IRS in July 2023, an increase in stock-based compensation-related tax benefits, partially offset by a decrease in the U.S. federal Foreign Derived Intangible Income tax deduction.

The OECD is coordinating negotiations among more than 140 countries with the goal of achieving consensus around substantial changes to international tax policies, including the implementation of a minimum global effective tax rate of 15%. Some countries have already implemented the legislation effective January 1, 2024, and we expect others to follow, however we do not expect a material change to our income tax provision for the 2024 fiscal year. As additional jurisdictions enact such legislation, transitional rules lapse, and other provisions of the minimum tax legislation become effective, we expect our effective tax rate and cash tax payments could increase in future years.

Financial Condition

Cash, Cash Equivalents, and Marketable Securities

As of June 30, 2024, we had \$100.7 billion in cash, cash equivalents, and short-term marketable securities. Cash equivalents and marketable securities are comprised of time deposits, money market funds, highly liquid

government bonds, corporate debt securities, mortgage-backed and asset-backed securities, and marketable equity securities.

Sources, Uses of Cash and Related Trends

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

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

	Six Months Ended June 30,	
	2023	2024
Net cash provided by operating activities	\$ 52,175	\$ 55,488
Net cash used in investing activities	\$ (13,746)	\$ (11,345)
Net cash used in financing activities	\$ (34,403)	\$ (40,603)

Cash Provided by Operating Activities

Our largest source of cash provided by operations are advertising revenues generated by Google Search & other properties, Google Network properties, and YouTube properties. In Google Services, we also generate cash through consumer subscriptions, the sale of apps and in-app purchases, and devices. In Google Cloud, we generate cash through consumption-based fees and subscriptions for infrastructure, platform, collaboration tools, and other cloud services.

Our primary uses of cash from operating activities include payments to distribution and Google Network partners, to employees for compensation, and to content providers. Other uses of cash from operating activities include payments to suppliers for devices, to tax authorities for income taxes, and other general corporate expenditures.

Net cash provided by operating activities increased from the six months ended June 30, 2023 to the six months ended June 30, 2024 due to an increase in cash received from customers, partially offset by an increase in tax payments. The increase in tax payments in comparison to the prior year comparable period was primarily due to the 2023 IRS payment deferral relief made available to taxpayers headquartered in designated counties in California.

Cash Used in Investing Activities

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

Net cash used in investing activities decreased from the six months ended June 30, 2023 to the six months ended June 30, 2024 primarily due to an increase in maturities and sales of marketable securities, partially offset by increases in purchases of property and equipment and purchases of marketable securities.

Cash Used in Financing Activities

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

Net cash used in financing activities increased from the six months ended June 30, 2023 to the six months ended June 30, 2024 due to dividend payments, increases in repurchases of stock, and net payments related to stock-based award activities.

Liquidity and Material Cash Requirements

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

Capital Expenditures and Leases

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

Capital Expenditures

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

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

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

During the six months ended June 30, 2023 and 2024, we spent \$13.2 billion and \$25.2 billion on capital expenditures, respectively. We expect to increase, relative to 2023, our investment in our technical infrastructure, including servers, network equipment, and data centers, to support the growth of our business and our long-term initiatives, in particular in support of AI products and services. Depreciation of our property and equipment commences when the deployment of such assets are completed and are ready for our intended use. Land is not depreciated. For the six months ended June 30, 2023 and 2024, our depreciation on property and equipment was \$5.5 billion and \$7.1 billion, respectively.

Leases

For the six months ended June 30, 2023 and 2024, we recognized total operating lease assets of \$1.7 billion and \$897 million, respectively. As of June 30, 2024, the amount of total future lease payments under operating leases, which had a weighted average remaining lease term of 7.9 years, was \$16.9 billion.

As of June 30, 2024, we have entered into leases that have not yet commenced with future lease payments of \$5.2 billion, that are not yet recorded on our Consolidated Balance Sheets. These leases will commence between 2024 and 2027 with non-cancelable lease terms of one to 25 years.

For the six months ended June 30, 2023 and 2024, our operating lease expenses (including variable lease costs) were \$2.2 billion and \$2.3 billion, respectively. Finance lease costs were not material for the six months ended June 30, 2023 and 2024.

Financing

We have a short-term debt financing program of up to \$10.0 billion through the issuance of commercial paper. Net proceeds from this program are used for general corporate purposes. As of June 30, 2024, we had no commercial paper outstanding.

As of June 30, 2024, we had \$10.0 billion of revolving credit facilities, \$4.0 billion expiring in April 2025 and \$6.0 billion expiring in April 2028. The interest rates for all credit facilities are determined based on a formula using certain market rates, as well as our progress toward the achievement of certain sustainability goals. No amounts have been borrowed under the credit facilities.

As of June 30, 2024, we had senior unsecured notes outstanding with a total carrying value of \$11.9 billion. For additional information, see Note 5 of the Notes to Consolidated Financial Statements included in Item 1 of this Quarterly Report on Form 10-Q.

We primarily utilize contract manufacturers for the assembly of our servers used in our technical infrastructure and devices we sell. We have agreements where we may purchase components directly from suppliers and then supply these components to contract manufacturers for use in the assembly of the servers and devices. Certain of these arrangements result in a portion of the cash received from and paid to the contract manufacturers to be presented as financing activities in the Consolidated Statements of Cash Flows included in Item 1 of this Quarterly Report on Form 10-Q.

Share Repurchase Program

During the three and six months ended June 30, 2024, we repurchased and subsequently retired 92 million and 203 million shares for \$15.6 billion and \$31.7 billion, respectively.

In April 2023, the Board of Directors of Alphabet authorized the company to repurchase up to \$70.0 billion of its Class A and Class C shares. In April 2024, the Board of Directors of Alphabet authorized the company to repurchase up to an additional \$70.0 billion of its Class A and Class C shares. As of June 30, 2024, \$74.9 billion remained available for Class A and Class C share repurchases.

The following table presents Class A and Class C shares repurchased and subsequently retired (in millions):

	Three Months Ended June 30, 2024		Six Months Ended June 30, 2024	
	Shares	Amount	Shares	Amount
Class A share repurchases	19	\$ 3,265	43	\$ 6,615
Class C share repurchases	73	12,333	160	25,040
Total share repurchases⁽¹⁾	92	\$ 15,598	203	\$ 31,655

⁽¹⁾ Shares repurchased include unsettled repurchases as of June 30, 2024.

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

Dividend Program

On April 25, 2024, the Board of Directors of Alphabet declared a cash dividend of \$0.20 per share to stockholders of record as of June 10, 2024, on each of the company's Class A, Class B, and Class C shares. These dividends were paid on June 17, 2024, totaling to \$1.2 billion, \$173 million, and \$1.1 billion for Class A, Class B, and Class C shares, respectively.

The company intends to pay quarterly cash dividends in the future, subject to review and approval by the company's Board of Directors in its sole discretion.

European Commission Fines

In 2017, 2018, and 2019, the EC announced decisions that certain actions taken by Google infringed European competition law and imposed fines of €2.4 billion (\$2.7 billion as of June 27, 2017), €4.3 billion (\$5.1 billion as of June 30, 2018), and €1.5 billion (\$1.7 billion as of March 20, 2019), respectively. On September 14, 2022, the General Court reduced the 2018 fine from €4.3 billion to €4.1 billion. We subsequently filed an appeal to the European Court of Justice.

While each EC decision is under appeal, we included the fines in accrued expenses and other current liabilities on our Consolidated Balance Sheets, as we provided bank guarantees (in lieu of a cash payment) for the fines. For additional information, see Note 8 of the Notes to Consolidated Financial Statements included in Item 1 of this Quarterly Report on Form 10-Q.

Taxes

As of June 30, 2024, we had short-term income taxes payable of \$2.7 billion, related to a one-time transition tax payable incurred as a result of the U.S. Tax Cuts and Jobs Act ("Tax Act"). As permitted by the Tax Act, we will pay the transition tax in annual interest-free installments through 2025. We also have long-term taxes payable of \$7.7 billion primarily related to uncertain tax positions as of June 30, 2024.

Purchase Commitments and Other Contractual Obligations

As of June 30, 2024, we had material purchase commitments and other contractual obligations of \$54.9 billion, of which \$41.0 billion was short-term. These amounts primarily consist of purchase orders for certain technical infrastructure as well as the non-cancelable portion or the minimum cancellation fee in certain agreements related to commitments to purchase licenses, including content licenses, inventory, and network capacity. For those agreements with variable terms, we do not estimate the non-cancelable obligation beyond any minimum quantities and/or pricing as of June 30, 2024. In certain instances, the amount of our contractual obligations may change based on the expected timing of order fulfillment from our suppliers. For more information related to our content licenses, see Note 8 of the Notes to Consolidated Financial Statements included in Item I of this Quarterly Report on Form 10-Q.

In addition, we regularly enter into multi-year, non-cancellable agreements to purchase renewable energy and energy attributes, such as renewable energy certificates. These agreements do not include a minimum dollar commitment. The amounts to be paid under these agreements are based on the actual volumes to be generated and are not readily determinable.

Critical Accounting Estimates

See Part II, Item 7, "Critical Accounting Estimates" in our Annual Report on Form 10-K for the year ended December 31, 2023.

Available Information

Our website is located at www.abc.xyz, and our investor relations website is located at www.abc.xyz/investor. Access to 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, is available on our investor relations website, free of charge, after we file or furnish them with the SEC and they are available on the SEC's website at www.sec.gov.

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 "Governance." The content of our websites is not incorporated by reference into this Quarterly Report on Form 10-Q or in any other report or document we file with the SEC, and any references to our websites are intended to be inactive textual references only.

ITEM 3. QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK

For quantitative and qualitative disclosures about market risk, refer to Part II, Item 7A, Quantitative and Qualitative Disclosures About Market Risk, in our Annual Report on Form 10-K for the year ended December 31, 2023.

ITEM 4. CONTROLS AND PROCEDURES

Evaluation of Disclosure Controls and Procedures

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

Based on this evaluation, our chief executive officer and chief financial officer concluded that, as of June 30, 2024, our disclosure controls and procedures are designed at a reasonable assurance level and are effective to provide reasonable assurance that information we are required to disclose in reports that we file or submit under the Exchange Act is recorded, processed, summarized, and reported within the time periods specified in the SEC's rules and forms, and that such information is accumulated and communicated to our management, including our chief executive officer and chief financial officer, as appropriate, to allow timely decisions regarding required disclosure.

Changes in Internal Control over Financial Reporting

There have been no changes in our internal control over financial reporting that occurred during the quarter ended June 30, 2024 that have materially affected, or are reasonably likely to materially affect, our internal control over financial reporting.

Limitations on Effectiveness of Controls and Procedures

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

PART II. OTHER INFORMATION

ITEM 1. LEGAL PROCEEDINGS

For a description of our material pending legal proceedings, see Note 8 “Commitments and Contingencies - Legal Matters” of the Notes to Consolidated Financial Statements included in Part I, Item 1 of this Quarterly Report on Form 10-Q, which is incorporated herein by reference.

ITEM 1A. RISK FACTORS

Our operations and financial results are subject to various risks and uncertainties, including those described in Part I, Item 1A, “Risk Factors” in our Annual Report on Form 10-K for the year ended December 31, 2023, as updated in our Quarterly Report on Form 10-Q for the quarter ended March 31, 2024, which could adversely affect our business, financial condition, results of operations, cash flows, and the trading price of our stock. Below are material changes to our risk factors since our Quarterly Report on Form 10-Q for the quarter ended March 31, 2024.

We generate a significant portion of our revenues from advertising. 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 more than 75% of total revenues from online advertising in 2023. 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, such as our initiatives related to third-party cookies, including our recent announcement to move from phasing out all third-party cookies to a proposed user choice model (which remains subject to continuing discussions with regulators), as well as changes to other companies’ advertising and/or data privacy practices have in the past, and may in the future, affect the advertising that we are able to provide. 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 business, reputation, financial condition, and operating results.

In addition, expenditures by advertisers tend to correlate with overall economic conditions. Adverse macroeconomic conditions have affected, and may in the future affect, the demand for advertising, resulting in fluctuations in the amounts our advertisers spend on advertising, which could harm our financial condition and operating results.

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

Issuer Purchases of Equity Securities

The following table presents information with respect to Alphabet's repurchases of Class A and Class C stock during the quarter ended June 30, 2024.

Period	Total Number of Class A Shares Purchased (in thousands)	Total Number of Class C Shares Purchased (in thousands)	Average Price Paid per Class A Share ⁽²⁾	Average Price Paid per Class C Share ⁽²⁾	Total Number of Shares Purchased as Part of Publicly Announced Programs (in thousands)	Approximate Dollar Value of Shares that May Yet Be Purchased Under the Program (in millions)
April 1 - 30	8,101	28,903	\$ 159.68	\$ 160.18	37,004	\$ 84,523
May 1 - 31	6,380	23,177	\$ 172.74	\$ 174.14	29,557	\$ 79,419
June 1 - 30	4,849	20,397	\$ 179.38	\$ 179.75	25,246	\$ 74,904
Total	19,330	72,477			91,807	

(1) 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. For additional information related to share repurchases, see Note 9 of the Notes to Consolidated Financial Statements included in Part I, Item 1 of this Quarterly Report on Form 10-Q.

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

ITEM 5. OTHER INFORMATION

10b5-1 Trading Plans

During the fiscal quarter ended June 30, 2024, the following Section 16 officers and director adopted, modified, or terminated a “Rule 10b5-1 trading arrangement” (as defined in Item 408 of Regulation S-K of the Exchange Act):

- Prabhakar Raghavan, Senior Vice President, Knowledge and Information, Google, adopted a trading plan on May 13, 2024 (with the first trade under the plan scheduled for August 15, 2024). The trading plan will be effective until May 8, 2025 to sell an aggregate of 96,784 shares of Class C Capital Stock during the plan period.
- K. Ram Shriram, independent director, adopted a trading plan on May 30, 2024 (with the first trade under the plan scheduled for September 3, 2024). The trading plan will be effective until September 3, 2025 to sell an aggregate of 144,266 shares of Class A Common Stock during the plan period.
- Amie Thuener O’Toole, Vice President, Corporate Controller and Principal Accounting Officer, adopted a trading plan on May 31, 2024 (with the first trade under the plan scheduled for September 10, 2024). The trading plan will be effective until September 10, 2025 to sell an aggregate of (i) 16,996 shares of Class C Capital Stock plus (ii) 100% of the (net) shares resulting from the vesting of an additional 24,626 (gross) shares of Class C Capital Stock during the plan period (net shares are net of tax withholding).
- Kent Walker, President, Global Affairs, Chief Legal Officer and Secretary, effected a trading plan modification by terminating a trading plan on May 29, 2024 that was originally adopted on May 31, 2023, and adopting a new trading plan on May 29, 2024 (with the first trade under the new plan scheduled for September 3, 2024). The new trading plan will be effective until February 27, 2027 to sell 100% of the (net) shares resulting from the vesting of 355,887 (gross) shares of Class C Capital Stock during the plan period (net shares are net of tax withholding).*

*In accordance with SEC rules adopted on December 14, 2022, any modification or change to the amount, price, or timing of the purchase or sale of securities constitutes a termination of an existing Rule 10b5-1 trading arrangement and the adoption of a new Rule 10b5-1 trading arrangement.

There were no “non-Rule 10b5-1 trading arrangements” (as defined in Item 408 of Regulation S-K of the Exchange Act) adopted, modified or terminated during the fiscal quarter ended June 30, 2024 by our directors and Section 16 officers. Each of the Rule 10b5-1 trading arrangements are in accordance with our Policy Against Insider Trading and actual sale transactions made pursuant to such trading arrangements will be disclosed publicly in Section 16 filings with the SEC in accordance with applicable securities laws, rules, and regulations.

Compensatory Arrangements of Certain Officers

On April 16, 2024, the Leadership Development, Inclusion and Compensation Committee of the Board of Directors of Alphabet approved the accrual of dividend equivalent units to holders of all unvested stock units, subject to the approval of a dividend declaration by the Board of Directors of the company (which was announced on July 23, 2024). As stock units are not outstanding shares of stock and thus would not otherwise be entitled to participate in any dividends (including the one referenced above), the crediting of dividend equivalent units is intended to preserve the equity-based incentives intended by the company when the stock units were granted and to treat the holders of stock units consistently with all stockholders.

ITEM 6. EXHIBITS

Exhibit Number	Description	Incorporated by reference herein	
		Form	Date
10.01	◆ Letter Agreement, dated June 3, 2024, between Anat Ashkenazi and Alphabet Inc.	Current Report on Form 8-K (File No. 001-37580)	June 7, 2024
31.01	* Certification of Chief Executive Officer pursuant to Exchange Act Rules 13a-14(a) and 15d-14(a), as adopted pursuant to Section 302 of the Sarbanes-Oxley Act of 2002		
31.02	* Certification of Chief Financial Officer pursuant to Exchange Act Rules 13a-14(a) and 15d-14(a), as adopted pursuant to Section 302 of the Sarbanes-Oxley Act of 2002		
32.01	‡ Certifications of Chief Executive Officer and Chief Financial Officer pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002		
101.INS	* Inline XBRL Instance Document - the instance document does not appear in the Interactive Data File because its XBRL tags are embedded within the Inline XBRL document.		
101.SCH	* Inline XBRL Taxonomy Extension Schema Document		
101.CAL	* Inline XBRL Taxonomy Extension Calculation Linkbase Document		
101.DEF	* Inline XBRL Taxonomy Extension Definition Linkbase Document		
101.LAB	* Inline XBRL Taxonomy Extension Label Linkbase Document		
101.PRE	* Inline XBRL Taxonomy Extension Presentation Linkbase Document		
104	* Cover Page Interactive Data File (formatted as Inline XBRL and contained in Exhibit 101)		

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- ◆ Indicates management compensatory plan, contract, or arrangement.
 - * Filed herewith.
 - ‡ Furnished herewith.

SIGNATURES

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

July 23, 2024

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

Ruth M. Porat

President and Chief Investment Officer; Chief Financial Officer

July 23, 2024

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

Amie Thuener O'Toole

Vice President, Corporate Controller and Principal Accounting Officer

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

I, Sundar Pichai, certify that:

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

Date: July 23, 2024

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

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

I, Ruth Porat, certify that:

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

Date: July 23, 2024

/s/ RUTH PORAT

Ruth Porat
President and Chief
Investment Officer; Chief
Financial Officer

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

I, Sundar Pichai, certify pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, that the Quarterly Report on Form 10-Q of Alphabet Inc. for the quarterly period ended June 30, 2024, fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934 and that information contained in such Quarterly Report on Form 10-Q fairly presents, in all material respects, the financial condition and results of operations of Alphabet Inc.

Date: July 23, 2024

By:

/s/ SUNDAR PICHAI

Name:

Sundar Pichai

Title:

Chief Executive Officer
(Principal Executive Officer)

I, Ruth Porat, certify pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, that the Quarterly Report on Form 10-Q of Alphabet Inc. for the quarterly period ended June 30, 2024, fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934 and that information contained in such Quarterly Report on Form 10-Q fairly presents, in all material respects, the financial condition and results of operations of Alphabet Inc.

Date: July 23, 2024

By:

/s/ RUTH PORAT

Name:

Ruth Porat

Title:

President and Chief Investment Officer; Chief
Financial Officer

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

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LEGAL ADVISERS TO THE ISSUER

(as to Singapore law)

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