GREYSTONE
EQUITY RESEARCH

**Rating: BUY**

**Price Target: $358.81**

PRICE CLOSE (11/21/2024): $166.57

UPSIDE (%): 115.41%

## Analysts


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## Market Data (as of 11/22/2024)

| | |
|---|---|
| 52-Week High | $193.31 |
| 52-Week Low | $129.40 |
| Market Cap | $2.027T |
| Shares outstanding (M) | 12,460M |
| Beta | 1.03 |
| P/E Ratio | 22.06 |
| EV/EBITDA | 15.92 |

# Alphabet, Inc.

*Communications — Nasdaq Ticker: (GOOG)* *November 26, 2024*


(Figure 1) Source: Bloomberg Terminal (GF)

## Executive Summary

Alphabet, Inc. (GOOG) operates as a holding company, providing web-based search, advertisements, maps, software applications, mobile operating systems, consumer content, enterprise solutions, commerce, and hardware products. The company is a part of the communications sector, residing within the internet media and services industry. The company is a collection of businesses, the largest being Google, which reports as two segments: Google Services and Google Cloud. Google Service accounts for approximately 90% while Google Cloud accounts for approximately 10%, the company has other holdings classified as Other Bets. The Company is Headquartered in Mountain View, California, with locations in North America, Europe, and Asia. Alphabet continues to make significant research and development investment in the areas of AI and machine learning, as it looks to develop new innovative offerings and improve its existing ones. The company will continue to increase their spending in support of AI products and services, as well as acquisitions and strategic investments. Alphabet Inc. is a mega cap with a market cap of $2.19T, currently trading on the NASDAQ exchange at $166.57, as of the market close on November 21, 2024. This price is on the higher end of their 52-week range of $129.40-193.31, but as will be further analyzed, not nearly where it has the potential to be in the future.

### *Investment Thesis*

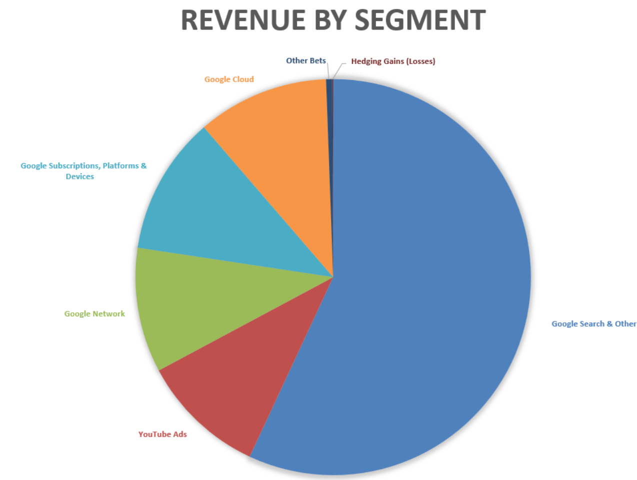
Alphabet is currently a BUY, with an expected value of $358.81. Objectively, their financial performance and expected growth notes them as being a technically undervalued company. The company's strong margins and ratios relative to peers and excess cash generation has positioned them to continue to expand their revenue streams. Alphabet controls approximately 90% of the global digital ad market driven by their Google Search and has dominance in the video advertising space through its YouTube product offering. The company has been able to diversify its revenue streams as it has matured;

with revenue from YouTube subscriptions, the Pixel product line, and Nest smart devices. With a P/E of 22.88, very reasonable compared to its historical average and peers, reflects there may still be untapped growth potential in the company. Alphabet has and will likely continue to benefit from the shift to digital channels and the cloud, as well as continuing growth into emerging markets. Despite the company being a mega cap in the mature growth phase of the business cycle, the longer-term future growth the company offers is still inciting. Alphabet is considered one of the global leaders in AI, investing heavily and so far, producing their Gemini Chatbot among other AI additions to existing products. While concerns about a potential breakup of Alphabet's core business exist, a contrarian approach suggests that a split up could uncover long-term value for shareholders by enabling the individual business to operate in a more efficient and profitable way. Alphabet is a well-established company with dominant control of the search engine space and consistently growing revenue streams; their global leading investment strategy in AI has positioned them to unlock the next wave of growth in the market. Alphabet offers leadership in digital advertising, cloud computing, and AI technology; while regulatory and competitive risk exist, the company's strong margins, ratios, and revenue growth make it well-positioned to capitalize on future long-term growth.

## Company Overview

### *Operations*

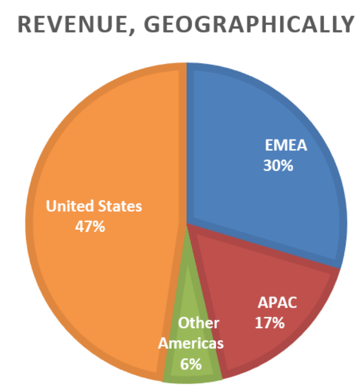
Originally founded as Google in 1998 by Larry Page and Sergey Brin, and re-launched in 2015 as a parent company, Alphabet, Inc. is the holding company for Google, which functions as the largest search engine and smartphone operating system in the world. Beyond these two dominant fields of work, Alphabet also holds Google's various internet offerings – Chrome, Gmail, Google Drive, Maps, Photos, and Play. Beyond the web, Google derives a small portion of their income from developing smaller emerging businesses.




*(Figure 2) Revenue by Segment*

*Source: Bloomberg Terminal (FA)*

Alphabet's revenue is approximately 90% derived from its Google Services – which includes Google Advertising, and Google Subscriptions Platforms and Devices. Advertising can be broken down into three major segments - Google Search (57% of total revenue), YouTube Ads (10.3% of total revenue), and Google Network (10.2% of total revenue). Google Subscriptions, Platforms, and Devices (also within the Services segment) account for 11.3% of total revenues. Outside of services, Google Cloud collects most of the remaining revenues at 10.8%. Other Bets and Hedges account for 0.5 and 0.1% of revenue.




*(Figure 3) Geographic Revenue Breakdown*

*Source: Bloomberg Terminal (FA)*

Qualifying as "world's largest" in many of their operational categories, it only makes sense that their revenue breakdown is geographically diverse. While a notable piece, 47%, based in the United States, the remaining majority is all rooted in international activity. The next 30% is placed in the EMEA regions (Europe, Middle East, and

Africa), followed by 17% in the Asia Pacific region, and the final 6% in the remaining Americas.

### *Cyclicity and Competition*

Alphabet, relative to its peers, is a company in the mature stage of its business cycle. It has a well-established presence in the sector and has a large enough stake so as to not easily have its growth wiped out. Previously, the telecommunications sector as a whole was in a state of decline, the shift of communicative media heading towards the internet and other more modern sources. Because of this, media and internet services were included in the sector, rebranding it as simply, "communications." This adaptation allowed the sector to find new growth opportunities, bringing it back into a mature stage – the sector today doesn't show signs of decline. Alphabet, while mature, has also adapted alongside its sector, looking to the future with sectors such as cloud computing and AI, which provide growth opportunities, allowing Alphabet to remain in the mature stage and avoid decline. This sub-industry of the sector functions as an oligopoly, within which Alphabet is a grappling force, with a small few competitor. These competitors, however, are a strong group with market power equal to Alphabet's own (Meta, Microsoft, Amazon, Apple). Their interest in prioritizing the development of AI strategies has, and will theoretically continue to, aid in their dominance of this market.

The communications sector, specifically the Media services industry, is heavily cyclical, due to their reliance on advertising revenues as a main source of income. In economic downturns, one of the first segments to see cuts for most companies is their advertising budget, which would ultimately end up being reflected in Alphabet's advertising revenue numbers. Another detail of this cyclicity is the tendency to see a fourth quarter upturn, with the chaos of holiday advertising campaigns and increased consumerism creating far more advertising revenues for Google.

### *Antitrust Lawsuit*

A major concern in Alphabet's outlook, which many analysts consider to have cast a foggy horizon, is Google's recent Anti-Trust lawsuit. The suit carries allegations regarding a monopolization of the browser and digital advertising market, claiming an abuse of an already dominant position. Google is estimated to control nearly 90% of the search market – and nearly 95% specifically on smartphones. Many regulators at the Federal Trade Commission see this dominance as being a setback to smaller platforms, inhibiting their potential growth in a market saturated by only one. Those against the suit claim that the anti-trust is an unfair punishment for Google simply succeeding in their industry. Regardless of moral inhibitions, the threat this poses to Googles future revenues is significant. If Google loses the suit, various selloffs have been proposed – one of the most prominent being the potential selloff of their Chrome browser, which is a major revenue driver. To reduce their monopolization of the smartphone market, they could be forced to lose their presence as the "automatic" browser on Apple devices – a convenience for which they pay tens of billions to Apple each year.

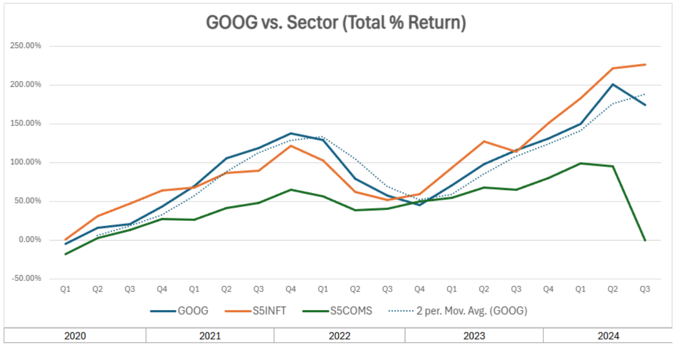
Google's rebuttal to these remedies is the claim that their success is rooted in strong products, and furthermore, that measures such as those proposed would be harmful to the consumers and small businesses who rely on their services for their own performance. An important point to keep in mind, is that this event is a temporary influencer of share prices. While the risk of lost revenue from potential selloffs is a worthwhile point to consider, it's crucial to remember that if a business genuinely has a strong strategy, their underlying value will continue to drive growth in the long-term, regardless of short-term influxes of volatility.

### *Management*

Alphabet consistently maintains a well-qualified team in its highest levels of leadership. Current CEO, Sundat Pichai, has served since 2019, but initially joined Google in 2004 in their product management and innovation segments. Recently, Ruth Porat sidestepped into the role of President and CIO, after having served as CFO since 2015. Co-Founders Larry Page and Sergey Brin stay actively involved in the company's well-being, both serving on the Board of Directors.

## Industry Overview

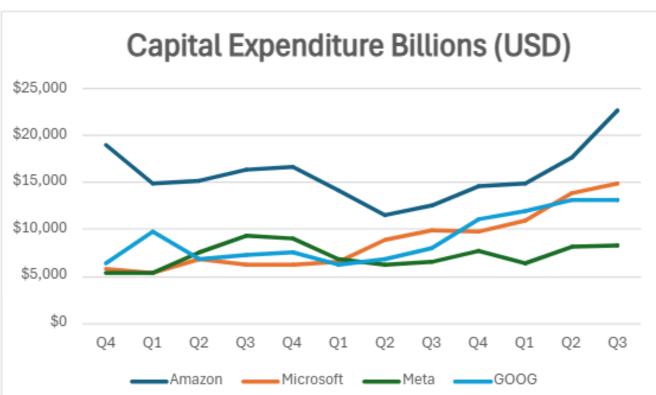
### *Performance vs. Sector*




*(Figure 4) Source: Bloomberg Terminal (COMP)*

The chart compares Alphabet (GOOG) with two sectors, Communication Services (S5COMS) and Information Technology (S5INFT). While Alphabet is a part of the Communication Services sector it follows a near identical cyclical trend to the Information Technology sector. The 5-year performance of Alphabet is greater than both the S5COMS and the SPX but follows short of the S5INFT. The total return over the period for Alphabet was 174.98%, while the S5COMS followed with a return of 114.19% and leading both was the S5INFT with a return of 173.32%. The company's large size means it is a market maker not a follower, its growth is largely based on economic and operational performance.

### *Capital Expenditures*



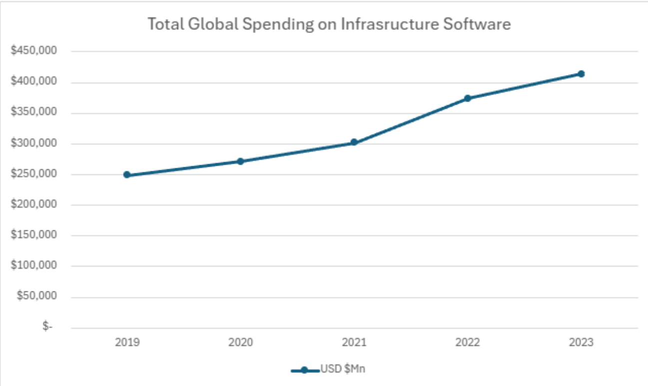

### *Artificial Intelligence*

Artificial Intelligence (AI) has significantly impacted the global landscape, transforming the communications and information technology sectors by driving innovation, enhancing efficiency, and unlocking new revenue streams. For the broader market, AI has enhanced cybersecurity detection, offered automation of network operations, and high-speed data processing and analysis. For Alphabet, they have spent the second most on Capital Expenditures consistently, with $14.923B in Q3 2024 trialing only Amzon's $22.620B. The company is at the forefront of innovation in this area. Google has established the world's leading AI research labs, which are credited with advancements in deep machine learning and generative AI. The company has rolled out products such as Bard now Gemini, an AI chatbot which has enhanced its core search engine capabilities. The company's core search algorithm is AI powered and many of its new products offered in the advertisement space use AI to optimize ad placement, improving performance metrics by utilizing behavioral data. The company's other product offerings such as YouTube, have used AI-driven recommendation algorithms to allow a more personalized user experience. Additionally, another number of the company's smaller products have begun utilizing innovative technology to enhance services. Being one of the dominant players in the industry, Alphabet has faced antitrust allegations and a growing concern for AI regulation. In California, measures have begun to take place to restrict the use of certain copyrighted images. Despite this, AI is truly reshaping the way the world works, and Alphabet is a key driver of this transformation and will certainly be a key beneficiary once revenues begin being tied to more accurately to AI.

### *Cloud Software*

Alphabet has experienced significant growth from its Google Cloud segment, generating over $33 Billion in revenue in 2023. This was Alphabets third largest segments and its fastest growing, showing the increased market presence Google Cloud has gained. The key drivers of this growth can be attributed to the shift to cloud-based infrastructure and solutions. For Google Cloud specifically, the use of AI and machine learning through their innovations like Gemini AI Chatbot and Tensor Flow. As the industry continues to grow, Google Clouds emphasis on AI tools and streamlining solutions for clients should position them for continued revenue growth.

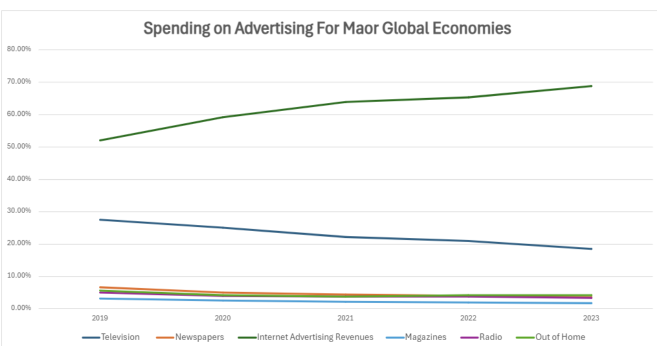
***Total Global Spending on Infrastructure Software***




*(Figure 5) Source: Bloomberg Terminal (BI ASFTG)*

The chart above shows the steady increase of total global spending on infrastructure software from 2019 to 2023, reaching nearly $415 Billion in 2023. Infrastructure software has increased due to a shift to cloud-based solutions and increased digitalization across all industries. The growth in spending shows the reliance on cloud-based platforms as businesses move away from previous solutions. For Alphabet, they benefit directly from the increased spending through Google Cloud; as its offering in cloud computing, machine learning, and developer tools align with the industry's future. The continued growth in global infrastructure software spending presents Alphabet with a significant opportunity to capitalize.

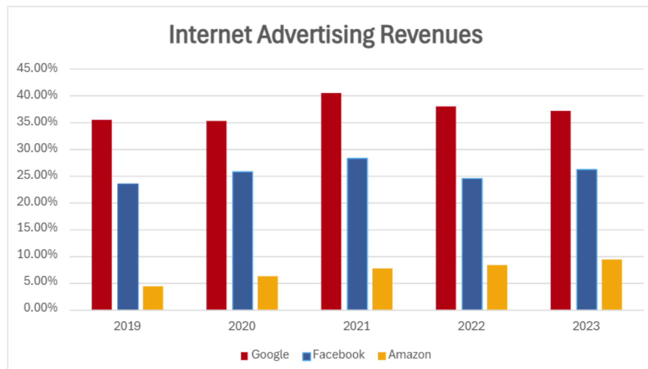
***Spending on Advertising for Major Global Economies (%)***




*(Figure 6) Source: Bloomberg Terminal (BI ADVIG)*

The chart above shows a clear trend in global advertising spending over the past four years, highlighting the increasingly dominant market share of internet advertising at the expense of more traditional channels like television. Internet advertising spending has increased significantly, rising from 52.10% market share of ad spending in 2019 to 68.70% in 2023. This growth reflects the shift to digital platforms driven by the expansion of the internet. Alphabet is one of the largest beneficiaries of this ongoing trend in advertising spending, as the leader in digital advertising. As the world continues to shift to the internet, the company's dominant market share provides growth opportunity. With Television ad spending declining, YouTube could emerge as a key beneficiary as a key alternative for video advertising. The shift in advertising spending reflects a focus on e-commerce and a societal shift to digital platforms. Alphabet is positioned to capture a significant share of the growing internet advertising market. While increased competition, especially in AI and increased regulation are challenges worth noting, the company's innovation and management team make them a strong player in the evolving advertising market.

***Internet Advertising Revenues by Company***




*(Figure 7) Source: Bloomberg Terminal (BI ADVIG)*

The chart above shows the consistently largest share of internet advertising revenue Google has, accounting for approximately 35-40% from 2019-2023. While google saw an increase in 2021, peaking at 40.40%, it has since decreased to 37.10% in 2023. Amazon was able to over doubt their growth from 4.30% in 2019 to 9.35% in 2023. As for Facebook they have experienced a similar trend to Google, peaking at 28.3% in 2021 before falling to 26.20% in 2023. Google has been the top performer across the internet advertising industry, maintaining over a 50% share among the top three which accounted for 72.65% of revenues in 2023. While Googles leadership in search advertising is the company's main revenue generator, YouTube has seen solid grow. For Alphabet to remain dominate in the advertising space they must continue to invest in privacy-compliant ad solutions and adapt to the ever-evolving regulations.

## Economic Outlook

***Overall Economic Outlook:***

The U.S. economy has remained resilient despite the fallout from the Covid-19 pandemic. While inflation spiked to as high as 9%, recent data suggests it is coming down. With Donald Trump coming into office there are concerns that his economic plan, which consists of an estimated $8 trillion budget deficit and aggressive tariffs especially on China will reignite inflation. The former Presidents plan is estimated to increase domestic production and benefit companies like Alphabet who are based in the U.S. and made up just under 50% of their total. Additionally, the Trump administration is expected to significantly influence the ongoing antitrust lawsuit against Alphabet, Inc. While the cases were initiated under his first term, Trump has expressed resentment towards breaking up American companies. The administration will have the ability to appoint key members in the antitrust department, including the Attorney General and head of the Federal Trade Commission. The outlook remains uncertain with a re-election of Trump, but the administration but certainly reevaluate the potential breakup.

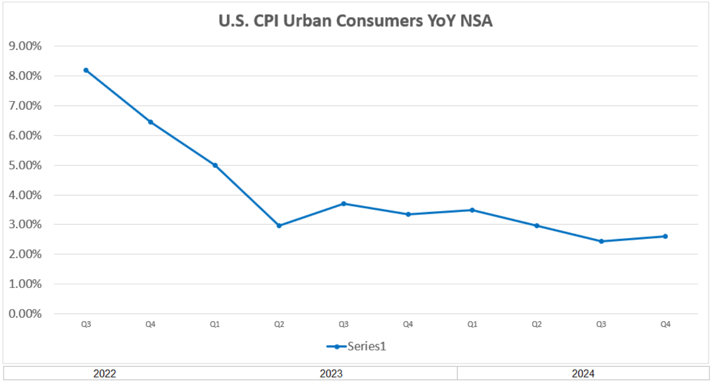
The internet media and services sector are very sensitive to economic downturns as the main revenue driver is advertising, which is largely dependent on favorable economic conditions. Within the digital advertising industry specifically, GDP growth and consumer spending are important factors; during economic downturns, business tend to cut down on discretionary spending, often advertising being one of the first expenses to be cut. Alphabet being such a large corporation faces many challenges such as inflation, labor costs, and increased regulation; due to their scale, they face these impacts on a much larger level. The company is impacted more during economic downturns.

**GDP**


*(Figure 8) Source: U.S. Bureau of Economic Analysis*

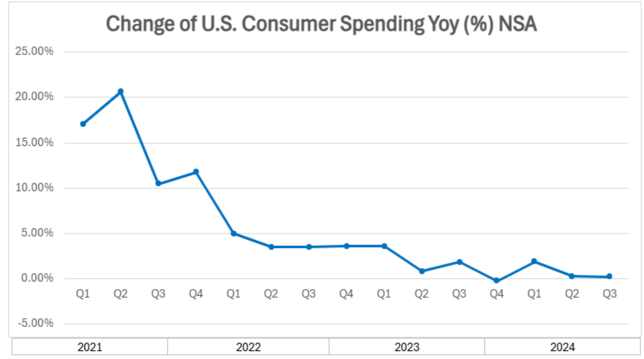
Real GDP growth came in stronger than expected in Q2 and Q3 of 2024, following a slowdown in Q1. While there are still concerns with the economy, the Federal Reserve is closing in on a soft-landing positioning GDP to remain stable or increase over the short-term future. The digital advertising industry's revenue is highly correlated with economic activity, as businesses largely base their budgeting off expected economic conditions. When economic activity increases so does ad spending, benefiting both Alphabet and the overall industry. Additionally, spending in cloud computing and software services is largely dependent on strong GDP growth. Strong economic growth also supports increased online retail activity which is a major contributor to Googles ad revenue stream. The major concern with increased GDP growth, especially within the technology field, is that wages can increase to a point where they outpace inflation growth, increasing labor costs. For Alphabet specifically, while future growth is uncertain, President Trumps proposed economic policies promote deregulation, tax cuts and the promise of lowering interest rates. With inflation and interest rates coming down and consumers spending expected to recover, Alphabet is well positioned to capitalize on any economic growth. The company's primary source of revenue stems from digital advertising, when GDP grows businesses tend to expand their advertising and marketing budgets. Higher GDP growth would also support consumer spending on Alphabet's subscriptions services like YouTube. Additionally, economic expansion encourages business to further invest in digital transition, cloud infrastructure, and AI investment, further supporting Alphabet's business model. The digital advertising, cloud computing, and media industries tend to experience significant gains during favorable economic periods but face challenges during periods of GDP stagnation and decline, with Alphabet's revenue being heavily tied to advertising budgets which fluctuate with GDP.

***CPI***




*(Figure 9) Source: Bloomberg Terminal (FCON)*

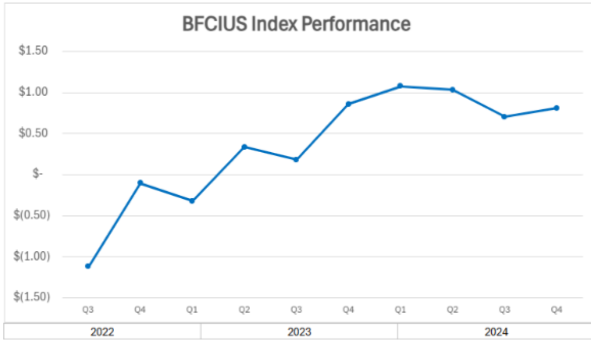
CPI data shows an overall decline over the past seven quarters as inflation has decreased. This has led to a recovery in consumer spending which could stimulate advertising and cloud spending. As inflation declines, consumer purchasing power begins to rise, which could stabilize ad rates and increase demand. The communication and information technology sectors have experienced increased demand for digital tools and platforms as consumers are more willing to spend. While speculative, interest rates could continue to drop which would lead to a more growth focused economy, with Alphabet at the front of the AI revolution. Additionally, improving interest rates helps improve discounted cash flow valuations, making the company appear more attractive. This will have an industry-wide effect which could heighten competition in the market and lead to increased spending and technological developments. Alphabet benefits from lower inflation through reduced cost for goods and service necessary to operate. Additionally, as the cost to borrow money decreases, Alphabet who are already heavily invested in AI and data infrastructure can save money on interest. Many of the company's product offerings are discretionary items, like tech services and e-commerce, both of which would see increased demand in lower interest rate markets. The steady reduction in inflation and interest rates favors Alphabet's short-term and long-term growth objective, with increasing revenues, demand and reduced costs.




*(Figure 10) Source: Bloomberg Terminal (ECAN)*

The chart represents the change in U.S. consumer spending on a year-over-year basis from the past 3 years. The chart shows growth peaking at over 20% following the recovery from the Covid-19 Pandemic. Since Q4 of 2021, growth has slowed, with the latest quarter recording an increase of just 0.22%. With nearly no growth in consumer spending, advertising revenues from companies like Alphabet could face pressure. Companies tend to target more cost-effective methods of advertising which may favor Alphabet over their peers, with their advanced AI powered ad targeting. The slowdown in spending growth could reduce demand for subscription-based services like YouTube and Google Paly store purchases. Additionally, consumers could look to shift towards free platforms and services which would benefit Alphabet through their search, email and maps products. While the broader communications and information technology industry may be forced to cut spending on cloud infrastructure and AI advancements, Alphabet is fully committed to increasing their capital expenditures. This could present an opportunity to position its cloud services as a cost-saving solution for businesses looking to improve their margins. To remain competitive, companies within the Communication and IT sectors must invest heavily in research and development with the goal of being able to generate diverse revenues steams in economic downturns. The recent stagnation in U.S. consumer spending presents challenges for the industry and for Alphabet with their ad-driven revenue mode. However, with inflation coming down and consumer confidence ticking up last Quarter, the outlook is positive.

***BIFCIUS Index Performance***




*(Figure 11) Source: Bloomberg Terminal (BFCIUS GP)*

The chart above shows the recent economic recovery post Covid-19, peaking in Q1 2024 before slightly dropping and now recovering in the latest quarter. The upward trend in the index from 2022 to 2023 indicates a continuously improving economy, which is correlated to the broader market performance over the past couple years. Over the past year, the market has stabilized, causing some concern about a slowdown. If conditions remain stable, companies may look to cut back on spending to improve margins. As the economy has recovered, many of Alphabets main competitors in the information technology sector have experienced exceptional growth. Now with the plateaued growth across the market, increased coemption within the sector is expected. Additionally, increased spending on infrastructure and software has been prevalent over the past couple years, correlated to the improved economic outlook. Throughout the current fiscal year, Alphabet and its competitors have focused on expanding into emerging markets and improving existing products with the implementation of AI solutions. Overall, the outlook of the BFCIUS Index is one of mixed opinions, while there is a strong recovery post covid, the economy has slowed down into a stagnant state. However, with consumer confidence slightly ticking up and inflation coming down, a favorable macroeconomic run could likely be ahead.

***Porters 5 Forces:***

*Threat of New Entrants: Moderate to Low*

The Communications and Information Technology sector require a high barrier of entry, due to the capital-intensive infrastructure, brand recognition, research and development and now more than ever the talent required. As AI has transformed both sectors, the need to invest in it and attract talented researchers to utilize the technology has significantly grown. There is the risk of innovative startups such as Open AI taking Alphabets market share in the search engine space. However, the company can leverage its size and diverse revenue streams to maintain its industry leading position. Alphabet's position in the search engine space through Google and content creation space through YouTube have created a moat around them. The company's continuous investment and innovations in AI have strengthened this competitive moat. With products like Android, Chrome, and Gemini Alphabet are well-positioned to stay atop the search engine industry with growing users, brand recognition and loyalty.

*Bargaining Power of Suppliers: Low*

Larger companies like Alphabet have leverage over suppliers due to the bulk number of supplies and equipment needed to operate and grow. Alphabet is also able to develop its own software, hardware, and much of the AI innovations they use. Although talent in the industry is critical and hiring is competitive, Alphabets brand name and ability to offer attractive compensation mitigate this concern. Alphabet also operates its own data centers, reducing any supplier reliance and has had success in implementing automotive cost saving measures.

*Bargaining Power of Buyers: Low to Moderate*

The advertising industry is ever evolving and highly competitive, leading to advertisers demanding a high return on their investment. Due to the nature of Googles free and high-quality search engine, companies are forced to use it to attract business. While there are low switching costs for search engine advertising, Google's strong hold on the industry tends to leave users with little alternatives. While consumers of ads are not direct buyers, their preferences tend to shape the company's product offerings. Regardless, the company's unique product offerings (Google Search & YouTube) don't offer customers much of an alternative offering, reflected in the company's outstanding user retention.

*Threat of Substitute Products: Moderate to High*

While the search engine advertising space holds the most market share with approximately 40% of the internet advertising market, there is the threat of social media platforms like TikTok, and streaming services like Amazon who could divert advertising budgets away from the company. Additionally, the increasing threat of AI chatbots taking market share away from traditional search engines like Google is concerning. Googles AI-driven personal voice assistant is also under pressure, as alternative models exist that are better (Alexa, Sirri). Much like their AI chatbot (Bard, now Gemini) which lags Meta's AI bot, XI's Gronk model and Open Ai's Chat GPT-4o. Google does have an integrated system offering essential tools through Google Drive, which makes it difficult for many users to fully transition to alternative product offerings.

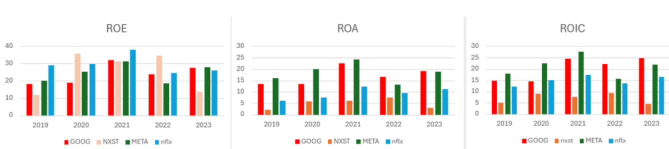
*Intensity of Rivalry: High*

Alphabet is among the most well-known and profitable companies in the world, which makes it the target and benchmark for all its competition. The main competitors for the company being Meta, Microsoft, Amazon, and Apple, coexist across many ecosystems and product offerings. The company is currently in an "arms race" with AI and cloud computing with its peers and has been among the first and most willing to invest in new technology. Google still dominates the traditional search engine space. Alphabet 's need for constant research and development in AI, cloud and advertising paired with increased streaming competition from Netflix and Tok-tok highlight the high threat of industry rivalry.

## Financial Analyses

### Margins and Ratios

Amongst its peers, Alphabet generally outperforms most of the sector, with the exception of Meta, who provides constant close competition. In the below graph, GOOG is held up against META and NFLX, both of whom operate in similar subsectors, and share similar market caps, as well as NXST, a current fund holding. In terms of ROE, all four companies stay within a relatively similar range each year, with Nexstar seeing some dramatic fluctuation.




*(Figure 12) Source: Bloomberg Terminal (FA)*

Dominance is proven once ROA and ROIC are brought into the picture. Nexstar quickly fades into disappointing numbers, and Netflix, while still in an objectively healthy range, subsides to the stellar performance of its peers. Google faces stiff competition from Meta, by whom it is frequently one-upped. In many situations, Alphabet and Meta seem to be interchangeably strong investment prospects – both show signs of great financial health and continued returns growth. This aspect of their competition is clearly reflected in these key financial metrics.

### P/E Focus

Alphabet has an enticingly low P/E, of only 22.47. While, in some sectors, a P/E of this value would be considered high enough to note an overvaluation, in the media sub-sector, P/E's follow suit of technology companies, sitting in a far higher range than usual. A higher P/E can also be common amongst mega-cap stocks. This is generally just a mere reflection of investor sentiment, meaning that, investors are investing for the long term, expecting that, what might be lower earnings today, will end up growing to create impressive returns in the future. For the sake of comparison, Meta has a P/E at 26.67, Netflix at 49.01, and Amazon at 43.14.

### Industry-Specific Metrics

Beyond ratios, industry-specific metrics are a unique way of gauging performance relative to peers. Information like this, often found in a 10-K or 10-Q, will offer an understanding of how certain aspects of revenue work, and where they come from. In comparing GOOG and META, these sorts of statistics can be found by looking at "clicks" and "impressions", and the cost of each click or impression. For the nine months ended in Q3 of 2024, Google saw a 5% increase in "Paid Clicks", but simultaneously, an 8% increase in cost-per-click. In the past 3 months, they saw a slightly lower 4% increase in paid clicks, and an 8% increase in costs-per-click. They also saw a 15% decline in impressions, coupled with a 14% increase in costs per impression. Interestingly, in the past 3 months, they've seen 14% declines in impressions alongside a 15% increase in costs-per-click. These statistics, combined, could imply a majorly fixed-cost setup, explaining why costs "per impression" would appear to increase as the amount of impressions decreases. By comparison, Meta offers statistics about the ad impressions, and their average price per ad – ad impressions are up 7% in the past year, and the price per ad is up 11%. While these statistics cover slightly different time ranges, they demonstrate relatively similar performance and usership increases. However, this can also show a difference in how these sorts of costs are evaluated – while Google's cost increases seemed to be reflective of declined impressions, Meta's seemed to be a genuine increase in costs, seeing as their impressions still increased, so fixed costs would be even further dispersed. This might be similar to how costs affect

Google's Paid Clicks, since those also saw increases matched with increased costs.

Another key metric to keep an eye out for in the Communications sector is Altman Z-Score. This metric is calculated to give a rating of a company's likeliness of bankruptcy. Generally, a score of 3 or higher indicates financial stability and safety – the communications sector is overrun with a plethora of unsafe investments by this standard. By filtering out companies in this unsafe range, an upper echelon of companies is revealed which, unsurprisingly, tend to outperform the index as a whole. On this standard, Google is given a score of 13.1, indicating its state as being extremely unlikely of going bankrupt, to nobody's surprise.

## Financial Forecasts

### *Income Statement*

| Pro Forma Income Statement<br>In Millions USD except per s | 12/31/2024 | Growth Rate | 12/31/2023 |
|---|---|---|---|
| **Revenues** | **360,858.02** | **17.39%** | **307,394.00** |
| COGS | 155,568.68 | | 133,332.00 |
| **Gross Profit** | **205,289.34** | **17.94%** | **174,062.00** |
| Operating Expenses | 100,966.08 | | 89,769.00 |
| **Operating Income** | **104,323.25** | **23.76%** | **84,293.00** |
| Other Expenses | -32,082.54 | | -23,910.81 |
| Earnings Before Taxes (EBT) | 136,405.79 | | 108,203.81 |
| Income Tax Expense | 47,060.00 | | 34,408.81 |
| **Net Income** | **89,345.79** | **21.07%** | **73,795.00** |

*(Figure 13) Source: Alphabet 2024 10-K*

The Pro-Forma Income Statement was created based on 5-year geometric growth rate averages of the various boldened fields comprising the income statement. Alphabet proves to be growing at a strong and consistent rate, resulting in a projecting 17.39% increase in revenues. Beyond this, Net Income managed to grow by 21.07%. Since these numbers come from the averages of FY 2019-FY 2023, this draws the conclusion that, since Net Income has grown at a higher rate than revenue, costs must be decreasing over time.

### *Balance Sheet*

| Pro Forma Balance Sheet<br>In millions USD except Per Share | FY 2024 | Change | FY 2023 |
|---|---|---|---|
| Total Current Assets | 209,338.88 | $37,808.88 | 171,530.00 |
| Total Fixed Assets | 281,748.92 | 50,886.92 | 230,862.00 |
| **Total Assets** | **491,087.79** | 88,695.79 | **402,392.00** |
| Current Liabilities | 81,814.00 | - | 81,814.00 |
| Long-Term Liabilities | 37,199.00 | - | 37,199.00 |
| **Total Liabilities** | 119,013.00 | | **119,013.00** |
| Total Equity | 372,074.79 | 88,695.79 | 283,379.00 |
| **Total Liabilities & Shareholder's Equity** | **491,087.79** | 88,695.79 | **402,392.00** |

*(Figure 14) Source: Alphabet 2024 10-K*

Based on the prior income statement, the pro-forma balance sheet is built out on the assumption that total liabilities and shareholder's equity will increase by the value of the projected FY 2024 Net Income, Sales, Share Buybacks and Dividends. Seeing as Google doesn't pay dividends, but has just announced a new share buyback plan, this value came out to be $86,695.79. Given this increase, the new balancing value comes out to $491,087.79. From here, the ratio of fixed versus current assets remains the same. Current and long-term liabilities are assumed to be unchanging.

## Valuations

### *Earnings Per Share Model*


*(Figure 15) EPS Valuation*

*Source: Bloomberg Terminal & Alphabet 2024 10-K*

Google's Buy recommendation is backed up by the positive results of an Earning Per Share valuation model. Looking at 5- and 10-year revenue and EPS CAGR's, as well as high and low PE average calculations, the model is ultimately based on a Low PE of 16, and a High PE of 29, alongside an EPS growth rate of 16.5%. These values produce a low price of **$93.44**, and **a high price** of **$365.45.** Given the current share price (As of November 22nd, 2024) of $166.57, these valuations offer upside potential of **118.19%,** and downside loss risk of 43.9%. Given these potential scenarios, the weight of the upside potential far outweighs the risk of loss, making GOOG a **Strong Buy** at **$365.45**.

### *Free Cash Flow Model*

| | | |
|---|---|---|
| **Google** | **GOOG** | **166.57** |
| Year 1 Cash Flow | | 68,735 |
| Discount Rate | | 7% |
| Growth Rate | | 16.5% |
| Year 11 Growth | | 2% |
| Capitalization Rate | | 5% |

| Year | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|---|---|---|---|---|---|---|---|---|---|---|
| Prior Year Cash Flow | 68,735 | 80,076 | 93,289 | 108,682 | 126,614 | 147,505 | 171,844 | 200,198 | 233,230 | 271,714 |
| Growth Rate | 17% | 17% | 17% | 17% | 17% | 17% | 17% | 17% | 17% | 17% |
| Cash Flow | 80,076 | 93,289 | 108,682 | 126,614 | 147,505 | 171,844 | 200,198 | 233,230 | 271,714 | 316,546 |
| Discount Factor | 0.9346 | 0.8734 | 0.8163 | 0.7629 | 0.7130 | 0.6663 | 0.6227 | 0.5820 | 0.5439 | 0.5083 |
| Year 11 Cash Flow | | | | | | | | | | 322,877 |
| Terminal Value | | | | | | | | | | 6,457,544 |
| PV Cash Flow | $74,837.64 | $81,482.10 | $88,716.50 | $96,593.19 | $105,169.23 | $114,506.68 | $124,673.16 | $135,742.27 | $147,794.16 | $160,916.07 |
| PV Terminal Value | - | - | - | - | - | - | - | - | - | 3,282,688 |

| | |
|---|---|
| **Total PV** | **4,413,119** |
| Shares | 12460.0 |
| FCF/Share | $ 354.18 |
| Return | 113% |

UNDERVALUED

*(Figure 16) Free Cash Flow Model*

*Source: Bloomberg Terminal & Alphabet 2024 10-K*

The free cash flow model offers another resounding buy for Google. In this example, Google's present value is evaluated by the means of a $68,735 year-one cash flow, and a 16.5% growth rate over the next ten years. The model also takes into consideration a long-term growth rate of 2%. Given this data, a total present value of all future cash flows is generated, landing at $4,413,119. This value, given the shares outstanding of 12,460, results in a Present Value of **$354.18** per share. This value offers an **upside return of 112.63%.**

### *Valuation Method Weighting*

For the final target price of Google, the Earnings per Share model results were equally weighted alongside the Free Cash Flow model results. On occasion, different models will be given different weights depending on the company and the relevance of the data involved in the models – for example, a company that's known for offering consistent dividends that are genuine reflections of their performance might be valued with more weight put on the results of a dividend discount model. (This model was not used for GOOG, seeing as they don't pay a dividend.) Both valuations of Alphabet resulted in similar prices, highlighting the accuracy of each model, and suggesting that they are equally relevant. Based on this equal weighting, a final target price of **$358.81** is produced. This projected price would offer a **return of 115.41%**, making it a **strong buy**.

## Investment Rationale

### *Risk*

| Risk Category | Alphabet's Exposure |
|---|---|
| Regulatory & Legal | High |
| Revenue Concentration | Moderate |
| Competition (AI & Cloud) | High |
| Cybersecurity | High |
| Macroeconomic Cyclicality | High |

*(Figure 17): Risk Ratings*

The communications and information technology sectors are highly competitive, with major players like Meta, Amazon, Microsoft, and Apple constantly fighting for market share across various products and service offerings. Additionally, within the advertising and cloud service spaces, price wars are common, and startups can disturb niche markets. Innovative technologies like AI can also be very disruptive to the industry, as for Alphabet they are on the cutting-edge of this movement. Companies within these sectors carry the risk of cybersecurity attacks and data breaches, which can result in reputational damage, lawsuits, and loss of users. Another industry-wide concern, especially with Alphabet, is that a large portion of revenue comes from advertising, which is cyclical and sensitive to economic downturns. For Alphabet especially, the company is facing an ongoing antitrust lawsuit in the U.S., European Union, and India to break up the company's core business. Additionally, the company faces scrutiny over their data collection, raising concerns and increasing the company's exposure to further data regulation. The company also invests heavily in new innovative technology, which has raised questions over the ROI as several projects such as Waymo, DeepMind, and Google Fiber have remained unprofitable. Alphabet operates in a highly completive industry that requires large amounts of spending on R&D. The company's industry lead in search, advertising, and growing cloud computing provides a significant competitive advantage; although they face substantial risk from regulation, competition, and privacy concerns.

### *Contrarian Approach*

While are concerns about regulatory pressures leading to the breakup of Alphabets core business, a contrarian approach suggests that this could unlock significant shareholder value. Alphabet operates as a holding company with diverse business offerings such as Google Search, YouTube, Google Cloud, Waymo, etc. A breakup of Alphabets businesses would allow each to operate independently, allowing for a more defined business focus, asset allocation, and clearer financial reporting. An example of a spin-off having success is eBay's PayPal which allowed both companies to focus on their core business which enabled growth. The potential breakup could also allow for faster innovation and more improved decision making as in the past companies like Hewlett-Packard split their business and were able to achieve higher growth in one business and steady cash flows in the other. Additionally, the large nature of Alphabet poses the chance for their induvial operations to simply be undervalued. Some of their high growth segments like AI and Cloud offering could have unappreciated value due to them being part of the larger holding company. Another benefit of the split up is that existing investors would now be able to allocate their share of stock into the business' they want to oppose to the entirety of Alphabet holdings. Regardless of what happens, Alphabet's core business is likely to remain highly profitable whether they stand alone or fall under the umbrella of their holding company. As market sentiment in the company comes down due to the antitrust concerns, Alphabet (GOOG) falls into the category of **UNDERVALUED** and **STRONG BUY**.

***Optimism***

| Growth Category | Alphabet's Potenital |
|---|---|
| AI and Cloud | High |
| Advertising Revenue | Moderate |
| Global Exapnsion | High |
| Subscription Growth | Moderate |
| Future Innovations | High |

*(Figure 18) Growth Ratings*

The global transition to digital infrastructure and cloud computing has allowed Alphabet to grow exponentially. While the company enters a mature phase of growth, there is reason to believe another wave of growth may be ahead. Businesses around the world are adapting to cloud computing, AI implementation, and new advanced technologies to improve efficiency and meet consumer demands. For Alphabet, have positioned themselves to grow with this shift and are on the forefront of the AI boom. The company also benefits largely from the increasing shift to internet advertising, specifically search advertising, as the industry leader. Another untapped market for Alphabet is the emerging market where Alphabet is still slowing reaching, this is expected to provide a small but steady increase in revenue growth. The company's P/E of 21.95 offers an attractively low share price per share, suggesting the company may be undervalued by the market. While the company doesn't have much room to increase market share, there revenues have continuously increased over the past decade. Alphabets main offers, Google Search and YouTube remain the industry leaders, with no expected immediate downfall, the company is well positioned to continue to grow its revenues by implementing new innovative technology like AI to these existing product offerings. Based on a final target price of **$358.81**, GOOG's projected price would offer a **return of 115.41%**, making it a **strong buy**.

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# GOOG Financial Statements

## Income Statement

**Alphabet Inc (GOOGL US) - BBG Adjusted**

| In Millions of USD except Per Share<br>12 Months Ending | FY 2017<br>12/31/2017 | FY 2018<br>12/31/2018 | FY 2019<br>12/31/2019 | FY 2020<br>12/31/2020 | FY 2021<br>12/31/2021 | FY 2022<br>12/31/2022 | FY 2023<br>12/31/2023 | Last 12M<br>9/30/2024 |
|---|---|---|---|---|---|---|---|---|
| **Revenue** | **110,855.00** | **136,819.00** | **161,857.00** | **182,527.00** | **257,637.00** | **282,836.00** | **307,394.00** | **339,859.00** |
| + Sales & Services Revenue | 95,577.00 | 116,461.00 | 134,811.00 | 146,924.00 | 209,497.00 | 224,473.00 | 237,855.00 | 268,440.00 |
| + Other Revenue | 15,278.00 | 20,358.00 | 27,046.00 | 35,603.00 | 48,140.00 | 58,363.00 | 69,539.00 | 71,419.00 |
| - Cost of Revenue | 45,583.00 | 59,549.00 | 71,896.00 | 84,732.00 | 110,939.00 | 126,203.00 | 133,332.00 | 143,115.00 |
| + Cost of Goods & Services | 45,583.00 | 59,549.00 | 71,896.00 | 84,732.00 | 110,939.00 | 126,203.00 | 133,332.00 | 143,115.00 |
| **Gross Profit** | **65,272.00** | **77,270.00** | **89,961.00** | **97,795.00** | **146,698.00** | **156,633.00** | **174,062.00** | **196,744.00** |
| + Other Operating Income | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| - Operating Expenses | 36,390.00 | 44,675.00 | 54,033.00 | 56,571.00 | 67,984.00 | 81,791.00 | 89,769.00 | 90,913.00 |
| + Selling, General & Admin | 19,765.00 | 23,256.00 | 28,015.00 | 28,998.00 | 36,422.00 | 42,291.00 | 44,342.00 | 43,153.00 |
| *+ Selling & Marketing* | *12,893.00* | *16,333.00* | *18,464.00* | *17,946.00* | *22,912.00* | *26,567.00* | *27,917.00* | *28,164.00* |
| *+ General & Administrative* | *6,872.00* | *6,923.00* | *9,551.00* | *11,052.00* | *13,510.00* | *15,724.00* | *16,425.00* | *14,989.00* |
| + Research & Development | 16,625.00 | 21,419.00 | 26,018.00 | 27,573.00 | 31,562.00 | 39,500.00 | 45,427.00 | 48,323.00 |
| + Other Operating Expense | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -563 |
| **Operating Income (Loss)** | **28,882.00** | **32,595.00** | **35,928.00** | **41,224.00** | **78,714.00** | **74,842.00** | **84,293.00** | **105,831.00** |
| - Non-Operating (Income) Loss | -1,240.00 | -2,062.00 | -2,532.00 | -749 | -1,324.00 | -1,544.00 | -6,551.00 | -9,052.00 |
| + Interest Expense, Net | -1,203.00 | -1,764.00 | -2,327.00 | -1,730.00 | -1,153.00 | -1,817.00 | -3,557.00 | -4,220.00 |
| *Interest Expense* | *109* | *114* | *100* | *135* | *346* | *357* | *308* | *284* |
| *- Interest Income* | *1,312.00* | *1,878.00* | *2,427.00* | *1,865.00* | *1,499.00* | *2,174.00* | *3,865.00* | *4,504.00* |
| + Foreign Exch (Gain) Loss | 121 | 80 | -103 | 344 | 240 | 654 | 1,238.00 | 837 |
| + Other Non-Op (Income) Loss | -158 | -378 | -102 | 637 | -411 | -381 | -4,232.00 | -5,669.00 |
| **Pretax Income (Loss), Adjusted** | **30,122.00** | **34,657.00** | **38,460.00** | **41,973.00** | **80,038.00** | **76,386.00** | **90,844.00** | **114,883.00** |
| - Abnormal Losses (Gains) | 2,929.00 | -256 | -1,165.00 | -6,109.00 | -10,696.00 | 5,058.00 | 5,127.00 | 2,899.00 |
| + Early Extinguishment of Debt | — | — | — | — | — | — | — | 160 |
| + Asset Write-Down | 156 | 120 | -390 | -401 | -334 | 337 | 628 | 389 |
| + Gain/Loss on Sale/Acquisition of Business | — | — | — | — | — | — | — | |
| + Legal Settlement | 2,736.00 | 5,071.00 | 1,697.00 | — | — | — | — | |
| + Restructuring | — | — | — | — | — | — | 3,933.00 | |
| + Sale of Investments | 37 | -2,648.00 | 152 | -2,064.00 | -1,086.00 | 2,506.00 | 1,215.00 | 1,129.00 |
| + Unrealized Investments | — | -4,002.00 | -2,950.00 | -4,253.00 | -11,184.00 | 3,013.00 | -392 | |
| + Other Abnormal Items | — | 1,203.00 | 326 | 609 | 1,908.00 | -798 | -257 | -158 |
| **Pretax Income (Loss), GAAP** | **27,193.00** | **34,913.00** | **39,625.00** | **48,082.00** | **90,734.00** | **71,328.00** | **85,717.00** | **111,984.00** |
| - Income Tax Expense (Benefit) | 14,531.00 | 4,177.00 | 5,282.00 | 7,813.00 | 14,701.00 | 11,356.00 | 11,922.00 | 17,715.00 |
| + Current Income Tax | 14,354.00 | 3,404.00 | 5,137.00 | 6,476.00 | 12,818.00 | 19,554.00 | 19,651.00 | |
| + Deferred Income Tax | 177 | 773 | 145 | 1,337.00 | 1,883.00 | -8,198.00 | -7,729.00 | |
| **Income (Loss) from Cont Ops** | **12,662.00** | **30,736.00** | **34,343.00** | **40,269.00** | **76,033.00** | **59,972.00** | **73,795.00** | **94,269.00** |
| - Net Extraordinary Losses (Gains) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| + Discontinued Operations | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| + XO & Accounting Changes | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **Income (Loss) Incl. MI** | **12,662.00** | **30,736.00** | **34,343.00** | **40,269.00** | **76,033.00** | **59,972.00** | **73,795.00** | **94,269.00** |
| - Minority Interest | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **Net Income, GAAP** | **12,662.00** | **30,736.00** | **34,343.00** | **40,269.00** | **76,033.00** | **59,972.00** | **73,795.00** | **94,269.00** |
| - Preferred Dividends | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| - Other Adjustments | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **Net Income Avail to Common, GAAP** | **12,662.00** | **30,736.00** | **34,343.00** | **40,269.00** | **76,033.00** | **59,972.00** | **73,795.00** | **94,269.00** |
| | | | | | | | | |
| **Net Income Avail to Common, Adj** | **25,423.50** | **30,697.00** | **33,422.70** | **35,442.90** | **67,583.20** | **63,967.80** | **77,845.30** | **96,559.20** |
| Net Abnormal Losses (Gains) | 12,761.50 | -39 | -920.4 | -4,826.10 | -8,449.80 | 3,995.80 | 4,050.30 | 2,290.20 |
| Net Extraordinary Losses (Gains) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | | | | | | | | |
| Basic Weighted Avg Shares | 13,858.00 | 13,902.80 | 13,851.90 | 13,616.30 | 13,353.00 | 13,063.00 | 12,630.00 | 12,290.00 |
| **Basic EPS, GAAP** | **0.91** | **2.21** | **2.48** | **2.96** | **5.69** | **4.59** | **5.84** | **7.62** |
| **Basic EPS from Cont Ops, GAAP** | **0.91** | **2.21** | **2.48** | **2.96** | **5.69** | **4.59** | **5.84** | **7.62** |
| **Basic EPS from Cont Ops, Adjusted** | **1.83** | **2.21** | **2.41** | **2.6** | **5.06** | **4.9** | **6.16** | **7.8** |
| | | | | | | | | |
| Diluted Weighted Avg Shares | 15,014.60 | 15,003.00 | 14,901.70 | 14,664.20 | 14,462.10 | 13,159.00 | 12,722.00 | 12,419.00 |
| **Diluted EPS, GAAP** | **0.9** | **2.19** | **2.46** | **2.93** | **5.61** | **4.56** | **5.8** | **7.54** |
| **Diluted EPS from Cont Ops, GAAP** | **0.9** | **2.19** | **2.46** | **2.93** | **5.61** | **4.56** | **5.8** | **7.54** |
| **Diluted EPS from Cont Ops, Adjusted** | **1.75** | **2.18** | **2.4** | **2.6** | **5.03** | **4.86** | **6.12** | **7.72** |
| | | | | | | | | |
| **Reference Items** | | | | | | | | |
| Accounting Standard | US GAAP | US GAAP | US GAAP | US GAAP | US GAAP | US GAAP | US GAAP | |
| EBITDA | 35,797.00 | 41,630.00 | 49,529.00 | 57,188.00 | 93,854.00 | 93,670.00 | 99,601.00 | 123,697.00 |
| EBITDA Margin (T12M) | 32.29 | 30.43 | 30.6 | 31.33 | 36.43 | 33.12 | 32.4 | 36.4 |
| EBITA | 29,694.00 | 33,466.00 | 38,673.00 | 44,283.00 | 82,299.00 | 78,383.00 | 87,655.00 | 109,275.00 |
| EBIT | 28,882.00 | 32,595.00 | 35,928.00 | 41,224.00 | 78,714.00 | 74,842.00 | 84,293.00 | 105,831.00 |
| Gross Margin | 58.88 | 56.48 | 55.58 | 53.58 | 56.94 | 55.38 | 56.63 | 57.89 |
| Operating Margin | 26.05 | 23.82 | 22.2 | 22.59 | 30.55 | 26.46 | 27.42 | 31.14 |
| Profit Margin | 22.93 | 22.44 | 20.65 | 19.42 | 26.23 | 22.62 | 25.32 | 28.41 |
| Sales per Employee | 1,383,784.80 | 1,385,214.28 | 1,361,298.24 | 1,349,043.98 | 1,646,242.81 | 1,486,779.44 | 1,684,332.23 | 1,876,980.98 |
| Dividends per Share | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.4 |
| Total Cash Common Dividends | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4,951.60 |
| Depreciation Expense | 6,103.00 | 8,164.00 | 10,856.00 | 12,905.00 | 11,555.00 | 15,287.00 | 11,946.00 | 14,422.00 |
| Rental Expense | 1,100.00 | 1,300.00 | 2,361.00 | 2,886.00 | 3,425.00 | 3,738.00 | 4,544.00 | 4,644.00 |

*Source: Bloomberg* *Right click to show data transparency (not supported for all values)*

## Balance Sheet

## Alphabet Inc (GOOGL US) - Standardized

| In Millions of USD except Per Share<br>12 Months Ending | FY 2014<br>12/31/2014 | FY 2015<br>12/31/2015 | FY 2016<br>12/31/2016 | FY 2017<br>12/31/2017 | FY 2018<br>12/31/2018 | FY 2019<br>12/31/2019 | FY 2020<br>12/31/2020 | FY 2021<br>12/31/2021 | FY 2022<br>12/31/2022 | FY 2023<br>12/31/2023 |
|---|---|---|---|---|---|---|---|---|---|---|
| **Total Assets** | | | | | | | | | | |
| + Cash, Cash Equivalents & STI | 64,395.00 | 73,066.00 | 86,333.00 | 101,871.00 | 109,140.00 | 119,675.00 | 136,694.00 | 139,649.00 | 113,762.00 | 110,916.00 |
| + Cash & Cash Equivalents | 18,347.00 | 16,549.00 | 12,918.00 | 10,715.00 | 16,701.00 | 18,498.00 | 26,465.00 | 20,945.00 | 21,879.00 | 24,048.00 |
| + ST Investments | 46,048.00 | 56,517.00 | 73,415.00 | 91,156.00 | 92,439.00 | 101,177.00 | 110,229.00 | 118,704.00 | 91,883.00 | 86,868.00 |
| + Accounts & Notes Receiv | 9,383.00 | 11,556.00 | 14,137.00 | 18,336.00 | 20,838.00 | 25,326.00 | 30,930.00 | 39,304.00 | 40,258.00 | 47,964.00 |
| + Accounts Receivable, Net | 9,383.00 | 11,556.00 | 14,137.00 | 18,336.00 | 20,838.00 | 25,326.00 | 30,930.00 | 39,304.00 | 40,258.00 | 47,964.00 |
| + Notes Receivable, Net | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| + Inventories | 0 | 491 | 268 | 749 | 1,107.00 | 999 | 728 | 1,170.00 | 2,670.00 | 0 |
| + Raw Materials | 0 | 0 | — | — | — | — | — | — | — | 0 |
| + Work In Process | 0 | — | — | — | — | — | — | — | — | 0 |
| + Finished Goods | 0 | 0 | — | — | — | — | — | — | — | 0 |
| + Other Inventory | 0 | — | — | — | — | — | — | — | — | 0 |
| + Other ST Assets | 4,878.00 | 5,001.00 | 4,670.00 | 3,352.00 | 4,591.00 | 6,578.00 | 5,944.00 | 8,020.00 | 8,105.00 | 12,650.00 |
| + Derivative & Hedging Assets | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| + Deferred Tax Assets | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | — |
| + Taxes Receivable | 591 | 1,903.00 | 95 | 369 | 355 | 2,166.00 | 454 | 0 | 0 | — |
| + Misc ST Assets | 4,287.00 | 3,098.00 | 4,575.00 | 2,983.00 | 4,236.00 | 4,412.00 | 5,490.00 | 8,020.00 | 8,105.00 | 12,650.00 |
| **Total Current Assets** | **78,656.00** | **90,114.00** | **105,408.00** | **124,308.00** | **135,676.00** | **152,578.00** | **174,296.00** | **188,143.00** | **164,795.00** | **171,530.00** |
| + Property, Plant & Equip, Net | 23,883.00 | 29,016.00 | 34,234.00 | 42,383.00 | 59,719.00 | 84,587.00 | 96,960.00 | 110,558.00 | 127,049.00 | 148,436.00 |
| + Property, Plant & Equip | 32,746.00 | 40,146.00 | 47,527.00 | 59,647.00 | 82,507.00 | 115,148.00 | 138,673.00 | 159,972.00 | 186,091.00 | 215,894.00 |
| - Accumulated Depreciation | 8,863.00 | 11,130.00 | 13,293.00 | 17,264.00 | 22,788.00 | 30,561.00 | 41,713.00 | 49,414.00 | 59,042.00 | 67,458.00 |
| + LT Investments & Receivables | 3,079.00 | 5,183.00 | 5,878.00 | 7,813.00 | 13,859.00 | 13,078.00 | 20,703.00 | 29,549.00 | 30,492.00 | 31,008.00 |
| + LT Investments | 3,079.00 | 5,183.00 | 5,878.00 | 7,813.00 | 13,859.00 | 13,078.00 | 20,703.00 | 29,549.00 | 30,492.00 | 31,008.00 |
| + Other LT Assets | 23,569.00 | 23,148.00 | 21,977.00 | 22,791.00 | 23,538.00 | 25,666.00 | 27,657.00 | 31,018.00 | 42,928.00 | 51,418.00 |
| + Total Intangible Assets | 20,206.00 | 19,716.00 | 19,775.00 | 19,439.00 | 20,108.00 | 22,603.00 | 22,620.00 | 24,373.00 | 31,044.00 | 29,198.00 |
| *+ Goodwill* | *15,599.00* | *15,869.00* | *16,468.00* | *16,747.00* | *17,888.00* | *20,624.00* | *21,175.00* | *22,956.00* | *28,960.00* | *29,198.00* |
| *+ Other Intangible Assets* | *4,607.00* | *3,847.00* | *3,307.00* | *2,692.00* | *2,220.00* | *1,979.00* | *1,445.00* | *1,417.00* | *2,084.00* | *0* |
| + Prepaid Expense | 3,187.00 | 3,181.00 | 1,819.00 | — | — | — | — | — | — | — |
| + Deferred Tax Assets | 176 | 251 | 383 | 680 | 737 | 721 | 1,084.00 | 1,284.00 | 5,261.00 | 12,169.00 |
| + Derivative & Hedging Assets | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| + Misc LT Assets | 0 | 0 | 0 | 2,672.00 | 2,693.00 | 2,342.00 | 3,953.00 | 5,361.00 | 6,623.00 | 10,051.00 |
| **Total Noncurrent Assets** | **50,531.00** | **57,347.00** | **62,089.00** | **72,987.00** | **97,116.00** | **123,331.00** | **145,320.00** | **171,125.00** | **200,469.00** | **230,862.00** |
| **Total Assets** | **129,187.00** | **147,461.00** | **167,497.00** | **197,295.00** | **232,792.00** | **275,909.00** | **319,616.00** | **359,268.00** | **365,264.00** | **402,392.00** |
| **Liabilities & Shareholders' Equity** | | | | | | | | | | |
| + Payables & Accruals | 11,236.00 | 12,853.00 | 15,535.00 | 22,399.00 | 32,603.00 | 41,745.00 | 50,974.00 | 58,083.00 | 61,807.00 | 74,078.00 |
| + Accounts Payable | 1,715.00 | 1,931.00 | 2,041.00 | 3,137.00 | 4,378.00 | 5,561.00 | 5,589.00 | 6,037.00 | 5,128.00 | 7,493.00 |
| + Accrued Taxes | 96 | 302 | 554 | 881 | 69 | 274 | 1,485.00 | — | — | — |
| + Interest & Dividends Payable | — | — | — | — | — | — | — | — | — | — |
| + Other Payables & Accruals | 9,425.00 | 10,620.00 | 12,940.00 | 18,381.00 | 28,156.00 | 35,910.00 | 43,900.00 | 52,046.00 | 56,679.00 | 66,585.00 |
| + ST Debt | 2,009.00 | 3,225.00 | 0 | 0 | 0 | 1,199.00 | 1,795.00 | 2,302.00 | 2,775.00 | 3,154.00 |
| + ST Borrowings | 1,999.00 | 2,000.00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| + ST Lease Liabilities | 10 | 225 | 0 | — | — | 1,199.00 | 1,795.00 | 2,302.00 | 2,775.00 | 3,154.00 |
| *+ ST Finance Leases* | *10* | *225* | *0* | — | — | — | *101* | *113* | *298* | *363* |
| *+ ST Operating Leases* | — | — | — | — | — | *1,199.00* | *1,694.00* | *2,189.00* | *2,477.00* | *2,791.00* |
| + Current Portion of LT Debt | 0 | 1,000.00 | — | 0 | 0 | — | — | — | — | — |
| + Other ST Liabilities | 3,534.00 | 3,232.00 | 1,221.00 | 1,784.00 | 2,017.00 | 2,277.00 | 4,065.00 | 3,869.00 | 4,718.00 | 4,582.00 |
| + Deferred Revenue | 752 | 788 | 1,099.00 | 1,432.00 | 1,784.00 | 1,908.00 | 2,543.00 | 3,288.00 | 3,908.00 | 4,137.00 |
| + Derivatives & Hedging | 4 | 16 | 122 | 352 | 233 | 369 | 1,522.00 | 581 | 810 | 445 |
| + Misc ST Liabilities | 2,778.00 | 2,428.00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **Total Current Liabilities** | **16,779.00** | **19,310.00** | **16,756.00** | **24,183.00** | **34,620.00** | **45,221.00** | **56,834.00** | **64,254.00** | **69,300.00** | **81,814.00** |
| + LT Debt | 3,228.00 | 1,995.00 | 3,935.00 | 3,969.00 | 4,012.00 | 14,768.00 | 25,078.00 | 26,206.00 | 27,202.00 | 25,713.00 |
| + LT Borrowings | 2,992.00 | 1,995.00 | 3,935.00 | 3,943.00 | 3,950.00 | 3,869.00 | 12,832.00 | 12,844.00 | 12,857.00 | 11,870.00 |
| + LT Lease Liabilities | 236 | 0 | 0 | 26 | 62 | 10,899.00 | 12,246.00 | 13,362.00 | 14,345.00 | 13,843.00 |
| *+ LT Finance Leases* | *236* | *0* | *0* | *26* | *62* | *685* | *1,100.00* | *1,973.00* | *1,844.00* | *1,383.00* |
| *+ LT Operating Leases* | — | — | — | — | — | *10,214.00* | *11,146.00* | *11,389.00* | *12,501.00* | *12,460.00* |
| + Other LT Liabilities | 5,320.00 | 5,825.00 | 7,770.00 | 16,641.00 | 16,532.00 | 14,478.00 | 15,160.00 | 17,173.00 | 12,618.00 | 11,486.00 |
| + Accrued Liabilities | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| + Pension Liabilities | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| *+ Pensions* | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* |
| *+ Other Post-Ret Benefits* | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* |
| + Deferred Revenue | 104 | 151 | 202 | 340 | 396 | 358 | 481 | 535 | 599 | 911 |
| + Deferred Tax Liabilities | 758 | 189 | 226 | 430 | 1,264.00 | 1,701.00 | 3,561.00 | 5,257.00 | 514 | 485 |
| + Derivatives & Hedging | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| + Misc LT Liabilities | 4,458.00 | 5,485.00 | 7,342.00 | 15,871.00 | 14,872.00 | 12,419.00 | 11,118.00 | 11,381.00 | 11,505.00 | 10,090.00 |
| **Total Noncurrent Liabilities** | **8,548.00** | **7,820.00** | **11,705.00** | **20,610.00** | **20,544.00** | **29,246.00** | **40,238.00** | **43,379.00** | **39,820.00** | **37,199.00** |
| **Total Liabilities** | **25,327.00** | **27,130.00** | **28,461.00** | **44,793.00** | **55,164.00** | **74,467.00** | **97,072.00** | **107,633.00** | **109,120.00** | **119,013.00** |
| + Preferred Equity and Hybrid Capital | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| + Share Capital & APIC | 28,767.00 | 32,982.00 | 36,307.00 | 40,247.00 | 45,049.00 | 50,552.00 | 58,510.00 | 61,774.00 | 68,184.00 | 76,534.00 |
| + Common Stock | 0.7 | 0.7 | 0.7 | 0.7 | 0.7 | 0.7 | 0.7 | 0.7 | 12.8 | 12.5 |
| + Additional Paid in Capital | 28,766.30 | 32,981.30 | 36,306.30 | 40,246.30 | 45,048.30 | 50,551.30 | 58,509.30 | 61,773.30 | 68,171.20 | 76,521.50 |
| - Treasury Stock | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| + Retained Earnings | 75,066.00 | 89,223.00 | 105,131.00 | 113,247.00 | 134,885.00 | 152,122.00 | 163,401.00 | 191,484.00 | 195,563.00 | 211,247.00 |
| + Other Equity | 27 | -1,874.00 | -2,402.00 | -992 | -2,306.00 | -1,232.00 | 633 | -1,623.00 | -7,603.00 | -4,402.00 |
| **Equity Before Minority Interest** | **103,860.00** | **120,331.00** | **139,036.00** | **152,502.00** | **177,628.00** | **201,442.00** | **222,544.00** | **251,635.00** | **256,144.00** | **283,379.00** |
| + Minority/Non Controlling Interest | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **Total Equity** | **103,860.00** | **120,331.00** | **139,036.00** | **152,502.00** | **177,628.00** | **201,442.00** | **222,544.00** | **251,635.00** | **256,144.00** | **283,379.00** |
| **Total Liabilities & Equity** | **129,187.00** | **147,461.00** | **167,497.00** | **197,295.00** | **232,792.00** | **275,909.00** | **319,616.00** | **359,268.00** | **365,264.00** | **402,392.00** |

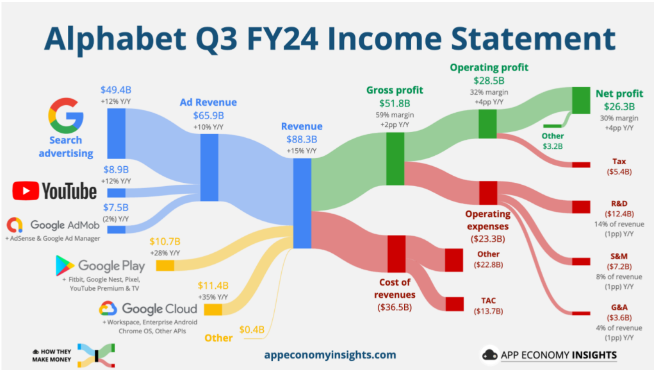
# Cash Flow Statement

| Alphabet Inc (GOOGL US) - Standardized | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| In Millions of USD except Per Share<br>12 Months Ending | FY 2015<br>12/31/2015 | FY 2016<br>12/31/2016 | FY 2017<br>12/31/2017 | FY 2018<br>12/31/2018 | FY 2019<br>12/31/2019 | FY 2020<br>12/31/2020 | FY 2021<br>12/31/2021 | FY 2022<br>12/31/2022 | FY 2023<br>12/31/2023 | Last 12M<br>9/30/2024 |
| **Cash from Operating Activities** | | | | | | | | | | |
| + Net Income | 16,348.00 | 19,478.00 | 12,662.00 | 30,736.00 | 34,343.00 | 40,269.00 | 76,033.00 | 59,972.00 | 73,795.00 | 94,269.00 |
| + Depreciation & Amortization | 5,063.00 | 6,144.00 | 6,915.00 | 9,035.00 | 11,781.00 | 13,697.00 | 12,441.00 | 15,928.00 | 11,946.00 | 14,422.00 |
| + Non-Cash Items | 5,570.00 | 7,426.00 | 6,104.00 | 2,085.00 | 6,956.00 | 8,001.00 | 2,855.00 | 12,784.00 | 17,707.00 | 16,609.00 |
| + Stock-Based Compensation | 5,203.00 | 6,703.00 | 7,679.00 | 9,353.00 | 10,794.00 | 12,991.00 | 15,376.00 | 19,362.00 | 22,460.00 | 22,634.00 |
| + Deferred Income Taxes | -179 | -38 | 258 | 778 | 173 | 1,390.00 | 1,808.00 | -8,081.00 | -7,763.00 | -5,479.00 |
| + Other Non-Cash Adj | 546 | 761 | -1,833.00 | -8,046.00 | -4,011.00 | -6,380.00 | -14,329.00 | 1,503.00 | 3,010.00 | -546 |
| + Chg in Non-Cash Work Cap | -409 | 2,988.00 | 11,410.00 | 6,115.00 | 1,440.00 | 3,157.00 | 323 | 2,811.00 | -1,702.00 | -20,199.00 |
| + (Inc) Dec in Accts Receiv | -2,094.00 | -2,578.00 | -3,768.00 | -2,169.00 | -4,340.00 | -6,524.00 | -9,095.00 | -2,317.00 | -7,833.00 | -7,839.00 |
| + (Inc) Dec in Inventories | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| + Inc (Dec) in Accts Payable | 203 | 110 | 731 | 1,067.00 | 428 | 694 | 283 | 707 | 664 | 385 |
| + Inc (Dec) in Other | 1,482.00 | 5,456.00 | 14,447.00 | 7,217.00 | 5,352.00 | 8,987.00 | 9,135.00 | 4,421.00 | 5,467.00 | -12,745.00 |
| + Net Cash From Disc Ops | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **Cash from Operating Activities** | **26,572.00** | **36,036.00** | **37,091.00** | **47,971.00** | **54,520.00** | **65,124.00** | **91,652.00** | **91,495.00** | **101,746.00** | **105,101.00** |
| **Cash from Investing Activities** | | | | | | | | | | |
| + Change in Fixed & Intang | -9,915.00 | -9,972.00 | -13,184.00 | -25,041.00 | -23,548.00 | -22,281.00 | -24,640.00 | -31,485.00 | -32,251.00 | -49,278.00 |
| + Disp in Fixed & Intang | 35 | 240 | 0 | 98 | 0 | 0 | 0 | 0 | 0 | 0 |
| *+ Disp of Fixed Prod Assets* | *35* | *240* | — | *98* | *0* | *0* | *0* | *0* | *0* | *0* |
| *+ Disp of Intangible Assets* | *0* | *0* | — | *0* | *0* | *0* | *0* | *0* | *0* | *0* |
| + Acq of Fixed & Intang | -9,950.00 | -10,212.00 | -13,184.00 | -25,139.00 | -23,548.00 | -22,281.00 | -24,640.00 | -31,485.00 | -32,251.00 | -49,278.00 |
| *+ Acq of Fixed Prod Assets* | *-9,950.00* | *-10,212.00* | *-13,184.00* | *-25,139.00* | *-23,548.00* | *-22,281.00* | *-24,640.00* | *-31,485.00* | *-32,251.00* | *-49,278.00* |
| *+ Acq of Intangible Assets* | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* |
| + Net Change in LT Investment | -2,172.00 | -615 | -1,212.00 | -321 | -1,527.00 | -6,152.00 | -1,904.00 | -2,381.00 | -2,080.00 | -3,149.00 |
| + Dec in LT Investment | 154 | 494 | 533 | 1,752.00 | 405 | 1,023.00 | 934 | 150 | 947 | 936 |
| + Inc in LT Investment | -2,326.00 | -1,109.00 | -1,745.00 | -2,073.00 | -1,932.00 | -7,175.00 | -2,838.00 | -2,531.00 | -3,027.00 | -4,085.00 |
| + Net Cash From Acq & Div | -236 | -986 | -287 | -1,491.00 | -2,515.00 | -738 | -2,618.00 | -6,969.00 | -495 | -2,869.00 |
| + Cash from Divestitures | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| + Cash for Acq of Subs | -236 | -986 | -287 | -1,491.00 | -2,515.00 | -738 | -2,618.00 | -6,969.00 | -495 | -2,869.00 |
| + Cash for JVs | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| + Other Investing Activities | -11,388.00 | -19,592.00 | -16,718.00 | -1,651.00 | -1,901.00 | -3,602.00 | -6,361.00 | 20,537.00 | 7,763.00 | 19,773.00 |
| + Net Cash From Disc Ops | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **Cash from Investing Activities** | **-23,711.00** | **-31,165.00** | **-31,401.00** | **-28,504.00** | **-29,491.00** | **-32,773.00** | **-35,523.00** | **-20,298.00** | **-27,063.00** | **-35,523.00** |
| **Cash from Financing Activities** | | | | | | | | | | |
| + Dividends Paid | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -4,921.00 |
| + Cash From (Repayment) Debt | -23 | -1,335.00 | -86 | -61 | -268 | 9,661.00 | -1,236.00 | -1,196.00 | -760 | -694 |
| + Cash From (Repay) ST Debt | — | — | — | — | — | — | — | — | — | |
| + Cash From LT Debt | — | — | — | — | — | — | — | — | — | |
| + Repayments of LT Debt | — | — | — | — | — | — | — | — | — | |
| + Cash (Repurchase) of Equity | -1,780.00 | -3,693.00 | -4,846.00 | -9,075.00 | -18,396.00 | -31,149.00 | -50,274.00 | -59,296.00 | -61,504.00 | -62,854.00 |
| + Increase in Capital Stock | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 8 |
| + Decrease in Capital Stock | -1,780.00 | -3,693.00 | -4,846.00 | -9,075.00 | -18,396.00 | -31,149.00 | -50,274.00 | -59,296.00 | -61,504.00 | -62,862.00 |
| + Other Financing Activities | -2,422.00 | -3,304.00 | -3,366.00 | -4,043.00 | -4,545.00 | -2,920.00 | -9,852.00 | -9,265.00 | -9,829.00 | -11,536.00 |
| + Net Cash From Disc Ops | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **Cash from Financing Activities** | **-4,225.00** | **-8,332.00** | **-8,298.00** | **-13,179.00** | **-23,209.00** | **-24,408.00** | **-61,362.00** | **-69,757.00** | **-72,093.00** | **-80,005.00** |
| Effect of Foreign Exchange Rates | -434 | -170 | 405 | -302 | -23 | 24 | -287 | -506 | -421 | -316 |
| **Net Changes in Cash** | **-1,798.00** | **-3,631.00** | **-2,203.00** | **5,986.00** | **1,797.00** | **7,967.00** | **-5,520.00** | **934** | **2,169.00** | **-10,743.00** |
| **Cash Paid for Taxes** | **3,651.00** | **1,643.00** | **6,191.00** | **5,671.00** | **8,203.00** | **4,990.00** | **13,412.00** | **18,892.00** | **19,164.00** | |
| **Cash Paid for Interest** | **96** | **84** | **84** | **69** | — | — | — | — | — | |
| **Reference Items** | | | | | | | | | | |
| EBITDA | 24,423.00 | 29,860.00 | 33,061.00 | 36,559.00 | 47,832.00 | 57,188.00 | 93,854.00 | 93,670.00 | 99,601.00 | 122,981.00 |
| Trailing 12M EBITDA Margin | 32.57 | 33.08 | 29.82 | 26.72 | 29.55 | 31.33 | 36.43 | 33.12 | 32.4 | 36.19 |
| Net Cash Paid for Acquisitions | 236 | 986 | 287 | 1,491.00 | 2,515.00 | 738 | 2,618.00 | 6,969.00 | 495 | 2,869.00 |
| Tax Benefit from Stock Options | 0 | — | — | — | — | — | — | — | — | |
| Free Cash Flow | 16,622.00 | 25,824.00 | 23,907.00 | 22,832.00 | 30,972.00 | 42,843.00 | 67,012.00 | 60,010.00 | 69,495.00 | 55,823.00 |
| Free Cash Flow to Firm | 16,708.50 | 25,924.00 | 23,957.80 | 22,932.40 | 31,058.70 | 42,956.10 | 67,301.90 | 60,310.20 | 69,760.20 | 56,062.30 |
| Free Cash Flow to Equity | 16,634.00 | 24,729.00 | 23,821.00 | 22,869.00 | 30,704.00 | 52,504.00 | 65,776.00 | 58,814.00 | 68,735.00 | 55,129.00 |
| Free Cash Flow per Basic Share | 1.21 | 1.87 | 1.73 | 1.64 | 2.24 | 3.15 | 5.02 | 4.59 | 5.5 | 4.51 |
| Price to Free Cash Flow | 32.04 | 21.24 | 30.53 | 31.81 | 29.95 | 27.85 | 28.86 | 19.21 | 25.39 | 36.52 |
| Cash Flow to Net Income | 1.63 | 1.85 | 2.93 | 1.56 | 1.59 | 1.62 | 1.21 | 1.53 | 1.38 | 1.17 |

*Source: Bloomberg* *Right click to show data transparency (not supported for all valu*

GREYSTONE
EQUITY RESEARCH

## *Exhibits*



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