Alphabet Inc GOOGL (NAS) | ★★★

Last Price	Fair Value	Consider Buy	Consider Sell	Uncertainty	Economic Moat™	Moat Trend™	Stewardship	Industry Group
730.03 USD	755.00 USD	453.00 USD	1,170.25 USD	High	Wide	Stable	Standard	Online Media

Alphabet Reports Mixed End to 2015, New Segment Reporting Shows Impact of Moonshots

See Page 2 for the full Analyst Note from 01 Feb 2016

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The primary analyst covering this company does not own its stock.

Research as of 01 Feb 2016
Estimates as of 22 Oct 2015
Pricing data through 04 Feb 2016
Rating updated as of 04 Feb 2016

Currency amounts expressed with "$" are in U.S. dollars (USD) unless otherwise denoted.

Contents

Investment Thesis 05 Oct 2015

With dominant Internet search product Google as its foundation, Alphabet has built an impressive portfolio that individuals use frequently, beyond Google search. These new products allow advertisers to reach out to potential customers multiple times, in multiple ways.

As consumers use multiple devices in a post-PC world, their changing behaviors shine a light on other successful products Alphabet has built in order to keep a hold on users and provide a greater benefit to advertisers. Google's mobile operating system and browser help to unify users' experience as they move from one device to another. The firm's success in products such as Gmail, the Chrome browser, and Google Maps provides a cohesive experience for users and helps Google show more relevant ads.

Our general thesis for the online media sector assumes that digital ad spending will consolidate around companies with unique assets and reach, such as Google and Facebook. A strong secular growth trend for online advertising is core to our thesis. The market for Internet search advertising is still growing in the double digits, while display advertising is growing thanks to newer innovations tying display ads to specific actions, including clicks, leads, and customers. Faster-growing geographies such as Asia are propping up overall growth rates even as pockets of economic weakness hit various regions.

Google search maintains more than 60% of worldwide market share; no other competitor has even 10%. We believe its early technical advantages attracted users who now use it habitually, creating a switching cost based on familiarity with the engine. Although we expect small movements in market share, we believe Google's dominance will persist and not lose more than 3-5 points of share.

Investors should be aware that Alphabet contains new businesses in robotics, life sciences, and the connected home (Nest), which are higher-risk opportunities than the core Google business. However, we think increased transparency around the remaining business will help maximize returns on capital.

Vital Statistics

Market Cap (USD Mil)	502,060
52-Week High (USD)	810.35
52-Week Low (USD)	525.00
52-Week Total Return %	38.8
YTD Total Return %	-6.2
Last Fiscal Year End	31 Dec 2014
5-Yr Forward Revenue CAGR %	12.2
5-Yr Forward EPS CAGR %	10.1
Price/Fair Value	0.97

Valuation Summary and Forecasts

Fiscal Year:	2013	2014	*2015(E)*	*2016(E)*
Price/Earnings	24.1	19.2	*24.5*	*21.7*
EV/EBITDA	16.8	14.2	*17.1*	*14.7*
EV/EBIT	21.1	18.5	*22.5*	*19.1*
Free Cash Flow Yield %	3.0	3.2	*3.2*	*3.8*
Dividend Yield %	—	—	—	—

Financial Summary and Forecasts (USD Mil)

Fiscal Year:	2013	2014	*2015(E)*	*2016(E)*
Revenue	55,519	66,001	*75,368*	*85,925*
Revenue YoY %	20.6	18.9	*14.2*	*14.0*
EBIT	15,403	16,496	*19,336*	*22,721*
EBIT YoY %	11.3	7.1	*17.2*	*17.5*
Net Income, Adjusted	15,782	18,723	*21,099*	*24,222*
Net Income YoY %	19.2	18.6	*12.7*	*14.8*
Diluted EPS	23.29	27.70	*29.85*	*33.59*
Diluted EPS YoY %	16.9	18.9	*7.8*	*12.6*
Free Cash Flow	8,531	793	*8,311*	*10,956*
Free Cash Flow YoY %	-1,018.2	-90.7	*947.7*	*31.8*

Historical/forecast data sources are Morningstar Estimates and may reflect adjustments.

Profile

Alphabet manages its core Google businesses, such as an Internet search engine that generates revenue when users click or view advertising related to their searches. This activity generates more than 80% of the company's revenue. The remaining revenue comes from advertising that Google places on other companies' websites and relatively smaller initiatives, such as YouTube, Google Cloud, and Nest.

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Morningstar Analysis

Alphabet Reports Mixed End to 2015, New Segment Reporting Shows Impact of Moonshots 01 Feb 2016

Alphabet posted mixed fourth-quarter results which beat consensus estimates for revenue and EPS while falling short versus operating income projections. The quarter was the first time management reported financial results by operating segments (Google and Other Bets). As expected, Google generates almost all revenue for the firm (99.4% of total revenue in 2015) and all of the operating income as Other Bets generated an operating loss of $3.6 billion for the year. Our fair value estimate is $755 and we are maintaining our wide moat rating.

Top line results for the full company were solid with 18% revenue growth (24% on a constant currency basis) driven by strong growth across all geography segments (U.S. up 24%, U.K. up 20% excluding FX, and Rest of the World up 26% excluding FX). Total operating margin improved 100 basis points to 32.0%. Within the Google segment, revenue growth of 18% was driven by 20% growth at Google Sites which more than offset the slower growth at Network Members (7%). Mobile continues to grow as other revenues improved 24%. We believe the investment in Android will pay off not only in driving mobile search, but also in other revenue streams such as the Google Play which increased spend per buyer 30% globally in 2015. Management also disclosed Gmail surpassed 1 billion monthly active users, joining the six other services (Chrome, Search, YouTube, Maps, Android and Google Play) with more than a billion monthly active users.

Within Other Bets, revenue grew 37% for the full year to $448 million, primarily via Nest, Fiber and Verily (life sciences) divisions. The majority of Other Bets businesses are in prerevenue stage and many are moonshots which may never generate revenue. Despite our expectation Other Bets will not meaningfully impact revenue for years, we believe the move to segment reporting allows investors to better gauge the level and success of investments made outside of the core Google business.

Valuation, Growth and Profitability 23 Oct 2015

Our fair value estimate of $755 is based on our forecast for very modest operating margin improvements from a 2012 trough and revenue growth of more than 12% annually during the next five years, slightly ahead of the growth rate for the overall online ad industry.

Revenue driven by Google websites includes the search engine and Web properties such as YouTube and Google Finance. Although we expect minor short-term loss of market share in search, we believe that improvements in monetization (the conversion of a search to a paid click on an advertisement) and overall market growth will help drive revenue. Additionally, with additional investment in display revenue technology and content on YouTube, we model Google websites to grow more than 13% per year. We also expect uplift from mobile search to support strong revenue growth in this core business. Excluding YouTube, Google search is the most significant cash generator and highest-margin business for Alphabet. We are more conservative in our view of revenue coming from Google Network. Google Network represents revenue earned by the placement of ads on partner websites. We anticipate this growth will be lower than the market, growing in the high single digits annually through 2019.

As operating expenses have continued to climb, we are becoming more watchful of the firm's limited potential for operating leverage as it enters new businesses. While we believe Alphabet could easily drive operating margins substantially above 40%, it would have to ratchet down its investment in research and development and its data centers to achieve these targets in the short term. It would also need to share less revenue with its partners, which we believe could disrupt the company's advertising ecosystem. We expect long-term operating margins to reach the mid-

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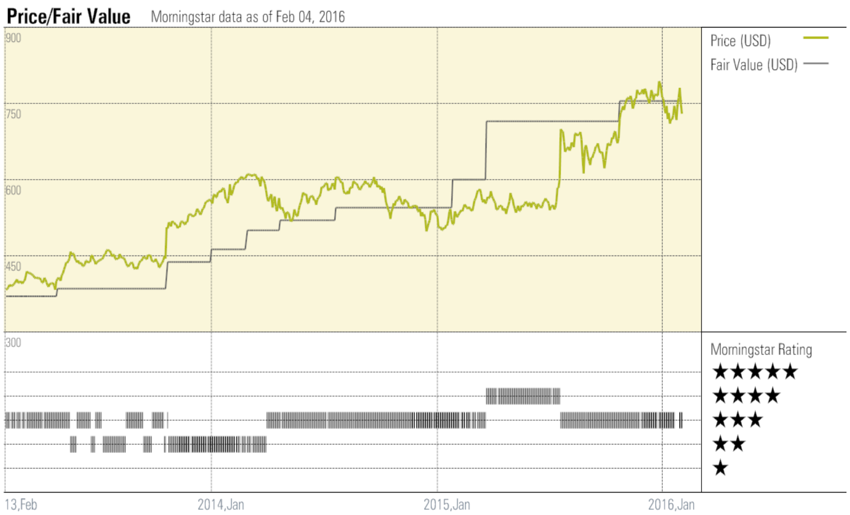

to high 20s, as the revenue mix continues to move away from desktop search, its most profitable segment. Because Alphabet is heavily investing in new markets, we expect free cash flow to be depressed over the next few years.

Scenario Analysis

In our bull-case scenario, we value the company at $1,045 per share. To reach this stock price, we expect modest gains in market share in search, while DoubleClick and YouTube drive annual revenue growth for display at 20% for several years. Additionally, we assume that the "other" category reaches $12 billion in revenue by 2016, including contribution from Google apps, search appliances, and future businesses such as mobile payments. We model an improvement in operating margins to exceed 35% under this scenario. In our bear-case scenario, we model growth in search revenue to not lag the market. Additionally, we cut the revenue forecast, assuming that many of Alphabet's investments in new businesses fail to bear fruit. We believe that much of Alphabet's spending is discretionary, and if these investments underperform, management can ratchet back its spending. In the bear-case scenario, our fair value would decline to $535, as revenue grows a mere 9.8% annually, but capital expenditures remain elevated despite slowing growth.

Importantly, our valuation assumes that the Google business gains market share in the display advertising business, where companies will spend money through Google to gain broad audience reach for branded advertising. While this business may result in lower margins, the higher growth, profitability, and returns on capital also push our valuation higher.

Economic Moat

We believe technology rarely creates sustainable competitive advantages, but we would be remiss not to recognize that Google's dominance in search was initially driven by superior technology, and this supremacy has continued. More Internet searches are performed on Google's servers than all other search engines combined, even as the competition has narrowed that technological advantage. In our view, consumers are accustomed to using Google, and their habits reinforce Google's moat. While the industry may not exhibit traditional switching costs, users may see little to no benefit in abandoning Google. Furthermore, the company can closely monitor clicks by every user to enhance the user experience. We would be surprised if the firm were to experience a dramatic loss of market share in search.

Alphabet has aggressively invested its cash flow in new areas, including its Android operating system for smartphones and tablets. More than 1 billion Android devices are in customers' hands. Although the Google segment does not earn any direct revenue from licensing Android to handset providers or from the sale of applications, having Google software on the phone helps to ensure that when users search, they use Google. We estimate that about 90% of mobile searches are performed on Google. Additionally, the firm runs a mobile ad display network, AdMob, which helps Google, application

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providers, and wireless carriers capture a piece of the growing online advertising market. By providing Android free of any license fees, Google has provided the entire ecosystem an alternative to Apple's iPhone and iPad. We estimate Google's mobile revenue including Google Play content and applications exceeded $12 billion in 2014.

We do not believe potential regulation will neutralize Google's existing competitive advantages, and a recent ruling by the Federal Trade Commission seems to support our stance. In our view, the genesis of lobbyists and politicians pushing for regulatory intervention is Google's dominant position. However, it is not clear that consumers are being harmed, and its difficult to envision new regulations that would level the playing field. Advertisers will continue to choose outlets where they get the biggest bang for their buck in terms of access to audience, reporting and analytics, and return on investment.

Moat Trend

We believe Alphabet's moat trend is stable. We expect the company to remain the dominant provider in Internet search on PCs, tablets, and handsets. As the Internet is still a disruptive force, however, we are closely watching several issues.

First, the launch of Facebook's Graph Search is significant, although the impact of social activity on the Internet is nascent and not fully understood. We do not believe Graph Search is a transformative product, simply because we don't expect users to abandon Googling in favor of Graph Searching. We believe that Internet search is good enough for most, and innovation is likely to be incremental. Furthermore, Internet searching habits are largely ingrained. The combination of these factors represents switching costs that we believe are easy to underestimate.

Facebook and Twitter are not only capturing users' time, but also grabbing information about them. Advertisers go where the users are, and the information about those users is valuable. Still, we are not seeing much evidence that these social networks are affecting search behavior. Instead, we believe companies that rely on display advertising are more vulnerable. In display, we do not believe Google has a moat, despite our prediction for strong revenue growth. Social networks may take the lead in the display market, but we believe this activity accelerates the shift of ad spending online and ultimately will benefit Google as well. Still, we plan to follow Facebook's efforts to diversity into search with great interest.

In our view, Google's moves with Android have been a major force in keeping its moat trend stable. Mobile advertising and search is potentially disruptive, and not only has Google made sure it has a seat at the table, it's at the head table. For Google, market share in the mobile industry is not only key to maintaining its core markets; it also provides great avenues to future revenue opportunities, including mobile payments and local deals. Both of these initiatives are being explored and tested.

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Bulls Say/Bears Say

Bulls Say

- There is still a large gap between time spent online and dollars allocated to Internet advertising spending. As branding advertising becomes more effective, we expect greater increases in online ad spending.
- Google's meteoric rise in smartphone market share through the Android platform should help to extend its competitive advantages into the mobile world.
- Google's water faucet of cash generation from search and long-term focus on new products provide new and significant opportunities for growth.

Bears Say

- Alphabet is highly leveraged to Google's market share in Internet search, as more than 80% of net revenue is generated by this activity.
- Though the company has invested aggressively in new products and acquisitions, it is challenging to prove that the efforts are generating excess returns on capital.
- Facebook's Graph Search threatens to disrupt some of the heretofore dominant players on the Web, including Google.

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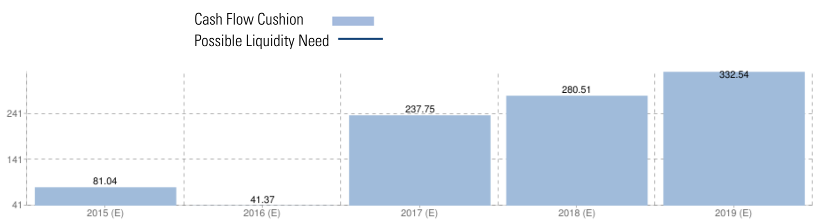
Five Year Adjusted Cash Flow Forecast (USD Mil)

	2015(E)	2016(E)	2017(E)	2018(E)	2019(E)
Cash and Equivalents (beginning of period)	64,395	73,316	79,951	94,448	112,088
Adjusted Available Cash Flow	14,293	17,568	20,738	24,346	28,741
Total Cash Available before Debt Service	78,688	90,884	100,689	118,794	140,829
Principal Payments	-10	-1,236	—	—	—
Interest Payments	—	—	—	—	—
Other Cash Obligations and Commitments	-961	-961	-424	-424	-424
Total Cash Obligations and Commitments	-971	-2,197	-424	-424	-424

Cumulative Annual Cash Flow Cushion



Adjusted Cash Flow Summary

	USD Millions	% of Commitments
Beginning Cash Balance	64,395	1,450.8
Sum of 5-Year Adjusted Free Cash Flow	105,686	2,381.1
Sum of Cash and 5-Year Cash Generation	170,081	3,832.0
Revolver Availability	—	—
Asset Adjusted Borrowings (Repayment)	—	—
Sum of Cash, 5-Year Cash Generation, Revolver and Adjustments	170,081	3,832.0
Sum of 5-Year Cash Commitments	-4,439	—

Financial Health

Alphabet's balance sheet remains very well capitalized, with more than $72.8 billion in cash and investments to support $5.2 billion in total debt and securities-lending liabilities. Relative to its cash position, the firm has an insignificant amount of debt and is generating copious amounts of cash flow. Its free cash flow, which was $14.6 billion over the past four quarters (excluding acquisitions) and has grown at an average rate of 28% during the past five years, is more than sufficient to fund operations and maintain its moat through investments or acquisitions in new markets and products. Despite explosive growth in recent years, the firm's asset mix remains conservative. At Sep. 30, net current assets represented more than half of total assets, while goodwill and intangible assets accounted for just 20%. Alphabet maintains a $3.0 billion revolving credit facility expiring in June 2016, which serves as a backstop for its commercial paper and short-term borrowing program. As of Sep. 30, no amounts were drawn against the facility.

Enterprise Risk

Although we believe Internet search is habitual, explicit switching costs are relatively low. Fickle consumers may move to a competitor that is able to establish a stronger brand or a more useful experience. Alphabet is investing in new businesses where it is less competitive, which may lead to a deterioration in its operating margin and return on capital. Advertisers may find new ways to reach their target audience in a cost-effective manner, like Facebook. Finally, competition in technology is fierce, and employee retention may become more difficult and cause an increase in operating costs.

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Management & Ownership

Management Activity

Name	Position	Shares Held	Report Date*	InsiderActivity
LARRY PAGE	Director	21,405,290	01 Feb 2016	366,668
SERGEY BRIN	Director	20,806,877	05 Jan 2016	333,336
DR. ERIC E. SCHMIDT,PHD	Director	1,257,984	30 Nov 2015	—
MS. DIANE B. GREENE	Director	203,168	25 Jan 2016	—
K. RAM SHRIRAM	Director	64,094	01 Jul 2015	—
K. RAM SHRIRAM	Director	63,748	01 Jul 2015	—
DR. ERIC E. SCHMIDT,PHD	Director	60,491	30 Nov 2015	—
MR. SUNDAR PICHAI		28,462	25 Jan 2016	—
LARRY PAGE	Director	14,000	01 Feb 2016	366,668
DAVID C. DRUMMOND		12,584	12 Jan 2016	15,582

*Represents the date on which the owner's name, position, and common shares held were reported by the holder or issuer.

Fund Ownership

Top Owners	% of Shares Held	% of Fund Assets	Change (k)	Portfolio Date
Vanguard Total Stock Mkt Idx	0.78	1.04	155	31 Dec 2015
Fidelity® Contrafund® Fund	0.66	3.13	24	30 Nov 2015
Vanguard 500 Index Fund	0.52	1.26	73	31 Dec 2015
Vanguard Institutional Index Fund	0.46	1.26	45	31 Dec 2015
VA CollegeAmerica Growth Fund of America	0.43	1.66	-801	31 Dec 2015
Concentrated Holders				
MFS Technology Fund	0.01	12.04	4	31 Dec 2015
MFS VIT II Technology Portfolio	—	11.90	0	31 Dec 2015
BCI Global Titan	—	11.84	—	31 Dec 2015
BT Investment Funds - BT TIME Fund	—	11.48	0	30 Nov 2015
Leland Thomson Reuters Vntr Cptl Idx Fd	—	10.75	1	30 Nov 2015

Institutional Transactions

Top 5 Buyers	% of Shares Held	% of Fund Assets	Shares Bought/ Sold (k)	Portfolio Date
Fidelity Management & Research Company	2.49	2.24	813	30 Nov 2015
Marsico Capital Management, LLC	0.11	4.85	742	30 Sep 2015
Waddell & Reed Investment Management Co	0.25	1.76	663	30 Sep 2015
American Century Inv Mgt Inc	0.22	2.77	573	30 Nov 2015
D. E. Shaw & Co LP	0.08	0.53	437	30 Sep 2015
Top 5 Sellers				
Capital Research and Management Company	1.31	0.92	-1,953	31 Dec 2015
Davis Selected Advisers LP	0.07	2.28	-394	31 Dec 2015
Grantham, Mayo, Van Otterloo & Co., LLC	0.19	2.84	-360	30 Sep 2015
State Street Global Advisors (Aus) Ltd	0.39	1.19	-214	25 Jan 2016
Dodge & Cox	0.12	0.82	-172	31 Dec 2015

Management 05 Oct 2015

In 2015, the company announced a new operating structure, renaming the corporate entity as Alphabet and placing core Google services (such as search, DoubleClick, YouTube, Android, and applications) into a wholly owned subsidiary named Google. Substantially all of Alphabet's profits come from the Google subsidiary. Sundar Pichai, a longtime Google employee, is CEO of Google, and Susan Wojcicki is CEO of YouTube. Ruth Porat is CFO of both the Google subsidiary and Alphabet, joining the company in 2015. She previously served as CFO of Morgan Stanley.

Cofounder Larry Page serves as CEO of Alphabet, a role he has held since April 2011. The company's equity has a dual-class structure that concentrates the voting power in the hands of Page, cofounder Sergey Brin, and former CEO Eric Schmidt, who hold two thirds of the voting rights. They also have a significant economic interest in the firm at more than 15%, which helps to align the interests of management with the shareholders.

The Alphabet restructuring should help to provide additional transparency, an area that has proven to be an analytical challenge in evaluating the firm's capital allocation. Furthermore, the revised structure may provide additional flexibility for employee retention and offer the potential for spinouts or other corporate activity as new products or subsidiaries become material to the Alphabet's enterprise value.

Generally, we are encouraged by management's long-term focus on capital allocation, although the lack of transparency around milestones for new projects presents an analytic challenge. We are encouraged that past acquisitions including DoubleClick, Android, and YouTube are bearing fruit and have widened the company's moat. Additionally, management has been pruning products that have not been hitting internal success metrics--a positive development, in our view. The company reached an agreement to sell Motorola's home business to Arris, another positive development, as we did not believe the segment generated excess returns and it had no strategic benefit.

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Top line results for the full company were solid with 18% revenue growth (24% on a constant currency basis) driven by strong growth across all geography segments (U.S. up 24%, U.K. up 20% excluding FX, and Rest of the World up 26% excluding FX). Total operating margin improved 100 basis points to 32.0%. Within the Google segment, revenue growth of 18% was driven by 20% growth at Google Sites which more than offset the slower growth at Network Members (7%). Mobile continues to grow as other revenues improved 24%. We believe the investment in Android will pay off not only in driving mobile search, but also in other revenue streams such as the Google Play which increased spend per buyer 30% globally in 2015. Management also disclosed Gmail surpassed 1 billion monthly active users, joining the six other services (Chrome, Search, YouTube, Maps, Android and Google Play) with more than a billion monthly active users.

Within Other Bets, revenue grew 37% for the full year to $448 million, primarily via Nest, Fiber and Verily (life sciences) divisions. The majority of Other Bets businesses are in prerevenue stage and many are moonshots which may never generate revenue. Despite our expectation Other Bets will not meaningfully impact revenue for years, we believe the move to segment reporting allows investors to better gauge the level and success of investments made outside of the core Google business.

Alphabet Under Review 25 Jan 2016

We are placing our fair value estimate for Alphabet under review as we transfer coverage to a different analyst. We will have an updated valuation published by Feb. 5.

Alphabet Seems to Be Adjusting to a Mobile World Just Fine; Results Support Our Investment Thesis 22 Oct 2015

Alphabet posted third-quarter results which were modestly ahead of our internal forecast, and mostly in line with our investment thesis tied to several themes including expanding operating margins, success in mobile advertising, and appropriate capital allocation. Management is clearly trying to communicate a more coherent message about its capital allocation strategy, as the company announced a plan to return more than $5 billion back to shareholders through a share buyback. (The precise amount is $5.09902951 billion. The square root of 26 is approximately 5.09902951 – and there are 26 letters in the English alphabet.) Although the buyback does not have a material effect on our valuation, we plan on increasing our fair value estimate roughly 5% as we revise our financial model to account for cash earned. We are also maintaining our wide moat rating, as the company's robust assets across desktop, mobile and video should deliver excess returns on capital for the next 20 years.

Revenue growth and margins across Alphabet's primary advertising ("Google") businesses were solid, as revenue grew 13% (23% on a constant currency basis), while operating margins improved 300 basis points to 25.2% after adjusting for a nonrecurring impairment charge in 2014. We believe that Google's control of foundational assets including Android and YouTube are allowing the company

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to enjoy similar economics and market share in digital advertising, even as consumers are spending an increasing amount of time on mobile devices. Google has 1.4 billion Android users, more than 1 billion Google Play users, and more than 1 billion YouTube users. Individually, each product has wide moat characteristics, but Google's ability to integrate customer data across these platforms and tie to search behavior is robust and defensible, in our view. We see no signs that the shift toward mobile computing is disrupting Google's business.

Management also announced a share buyback of nearly $5.1 billion, a signal that Alphabet understands the importance of capital allocation. The amount itself is underwhelming (the company holds more than $66 billion in net cash), but this is the first announced plan to address the ballooning amount of idle cash on the balance sheet in the history of the company. We estimate that the shares are likely to be purchased close to our fair value estimate, so the buyback does not have an incremental impact to our valuation, but we believe the action supports our view that management's interests are aligned with those of shareholders.

Lastly, the company briefly spoke about its new subscription video offering, called YouTube Red. For $9.99 a month (or $12.99 through Apple's iOS), viewers can gain access to YouTube's entire catalog without being forced to watch advertising. We aren't expecting massive adoption, at least while the library for original professional content is relatively slim, but we applaud Google's efforts to build and support a profitable content ecosystem while supporting an alternate business model for consumers. Competitively, we think this is a neutral to positive move for YouTube. The video property has scale, a highly used mobile application, and viewability across televisions, tablets, smartphones and desktops. Lastly, we think the company is taking a wise and differentiated strategy to invest in original content, including leveraging current YouTube stars. If this platform becomes more widely adopted by both users and content creators than we assume today, disrupting traditional pay TV or over-the-top providers (such as Netflix), our valuation is likely to be overly conservative.

Google Teaches Investors (the) Alphabet 11 Aug 2015

Google announced a plan to reorganize its management structure and lines of business, creating a new publicly traded entity called Alphabet. Google will become a wholly owned subsidiary (which contains core Google products such as Search, Android, Chrome, YouTube, and other applications such as Maps and Photos), led by newly named CEO Sundar Pichai. Previously, Pichai served as senior vice president, heading up Google-branded products for the Internet behemoth. The remaining assets of the newly formed Alphabet will include entities such as Nest, Fiber, Google X, life sciences initiatives, and corporate venture holdings. Larry Page and Sergey Brin will serve as CEO and president, respectively, of Alphabet, and will no longer serve in operating roles for the Google subsidiary. Ruth Porat will serve as CFO of both Alphabet and Google.

We believe the reorganization is generally positive for investors, as we believe the company's lack of transparency has created an overhang on the stock during the past year. Still, investors will own exactly the same assets after the reorganization, and we aren't likely to materially increase our $715 fair value estimate, though we reiterate our wide moat rating for the firm. The reorganization is planned for later this year.

Alphabet will disclose the financial results for its Google subsidiary separately from itself, in what we believe is the most positive outcome of the reorganization. Core to our thesis is our belief that operating leverage in the entire entity is likely to improve, as investments in the more nascent opportunities (including Nest, Fiber, and Google X), which are depressing operating margins, begin to bear fruit or wither. With discrete results reported for the Google

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business, investors will be able to understand the strength of the core while holding the company accountable for capital allocation in the remaining lines of business.

Longer-term positives are less obvious, in our view. We remain relatively neutral regarding the likelihood of businesses outside of Google's core generating outsize returns on capital; however, we do not view these investments in a negative light either. Still, as Alphabet evolves, the overall company will have richer opportunities for deal-making, flexibility for future shareholder-maximizing moves (such as spinouts, IPOs, and/or divestitures), and better alignment of incentives for employees.

Alphabet Inc GOOGL (NAS) | ★★★

Last Price	Fair Value	Consider Buy	Consider Sell	Uncertainty	Economic Moat™	Moat Trend™	Stewardship	Industry Group
730.03 USD	755.00 USD	453.00 USD	1,170.25 USD	High	Wide	Stable	Standard	Online Media

Morningstar Analyst Forecasts

Financial Summary and Forecasts

Fiscal Year Ends in December

Growth (% YoY)	3-Year Hist. CAGR	2012	2013	2014	2015 (Forecast)	2016 (Forecast)	5-Year Proj. CAGR
Revenue	*20.3*	21.5	20.6	18.9	*14.2*	*14.0*	*12.2*
EBIT	*12.0*	17.8	11.3	7.1	*17.2*	*17.5*	*15.3*
EBITDA	*17.5*	26.8	15.2	11.0	*18.1*	*16.7*	*13.6*
Net Income	*24.4*	36.0	19.2	18.6	*12.7*	*14.8*	*12.8*
Diluted EPS	*-2.4*	-33.1	16.9	18.9	*7.8*	*12.6*	*10.1*
Earnings Before Interest, after Tax	*6.2*	-5.6	17.8	7.6	*17.1*	*14.8*	*14.5*
Free Cash Flow	*-52.1*	-112.9	-1,018.2	-90.7	*947.7*	*31.8*	*91.6*

Profitability	3-Year Hist. Avg	2012	2013	2014	2015	2016	5-Year Proj. Avg
Operating Margin %	*27.6*	30.1	27.7	25.0	*25.7*	*26.4*	*27.3*
EBITDA Margin %	*34.6*	36.5	34.8	32.5	*33.7*	*34.4*	*34.1*
Net Margin %	*28.5*	28.8	28.4	28.4	*28.0*	*28.2*	*28.5*
Free Cash Flow Margin %	*4.9*	-2.0	15.4	1.2	*11.0*	*12.8*	*14.3*
ROIC %	*45.0*	54.2	42.0	38.7	*33.8*	*33.1*	*34.1*
Adjusted ROIC %	*71.1*	85.4	66.3	61.7	*52.6*	*49.7*	*51.2*
Return on Assets %	*13.9*	17.1	12.6	11.9	*11.7*	*12.0*	*12.1*
Return on Equity %	*17.6*	21.5	16.3	15.1	*14.5*	*14.6*	*14.4*

Leverage	3-Year Hist. Avg	2012	2013	2014	2015	2016	5-Year Proj. Avg
Debt/Capital	*0.06*	0.07	0.06	0.05	*0.04*	*0.04*	*0.03*
Total Debt/EBITDA	*0.28*	0.33	0.27	0.24	*0.21*	*0.18*	*0.16*
EBITDA/Interest Expense	—	—	—	—	—	—	—

Valuation Summary and Forecasts

	2013	2014	2015(E)	2016(E)
Price/Fair Value	1.28	0.97	—	—
Price/Earnings	24.1	19.2	*24.5*	*21.7*
EV/EBITDA	16.8	14.2	*17.1*	*14.7*
EV/EBIT	21.1	18.5	*22.5*	*19.1*
Free Cash Flow Yield %	3.0	3.2	*3.2*	*3.8*
Dividend Yield %	—	—	—	—

Key Valuation Drivers

Cost of Equity %	9.0
Pre-Tax Cost of Debt %	5.5
Weighted Average Cost of Capital %	9.0
Long-Run Tax Rate %	21.2
Stage II EBI Growth Rate %	7.6
Stage II Investment Rate %	13.7
Perpetuity Year	20

Additional estimates and scenarios available for download at http://select.morningstar.com.

Discounted Cash Flow Valuation

	USD Mil	Firm Value (%)	Per Share Value
Present Value Stage I	52,748	12.3	76.11
Present Value Stage II	203,225	47.5	293.24
Present Value Stage III	171,974	40.2	248.14
Total Firm Value	**427,947**	**100.0**	**617.49**
Cash and Equivalents	64,395	—	92.92
Debt	-5,237	—	-7.56
Preferred Stock	—	—	—
Other Adjustments	—	—	—
Equity Value	**487,105**	**—**	**702.85**
Projected Diluted Shares	693		
Fair Value per Share (USD)	—		

The data in the table above represent base-case forecasts in the company's reporting currency as of the beginning of the current year. Our fair value estimate may differ from the equity value per share shown above due to our time value of money adjustment and in cases where probability-weighted scenario analysis is performed.

Alphabet Inc GOOGL (NAS) | ★★★

Last Price	Fair Value	Consider Buy	Consider Sell	Uncertainty	Economic Moat™	Moat Trend™	Stewardship	Industry Group
730.03 USD	755.00 USD	453.00 USD	1,170.25 USD	High	Wide	Stable	Standard	Online Media

Morningstar Analyst Forecasts

Income Statement (USD Mil)

Fiscal Year Ends in December	2012	2013	2014	*Forecast 2015*	*Forecast 2016*
Revenue	**46,039**	**55,519**	**66,001**	***75,368***	***85,925***
Cost of Goods Sold	17,176	21,993	25,691	*28,521*	*32,948*
Gross Profit	**28,863**	**33,526**	**40,310**	***46,847***	***52,977***
Selling, General & Administrative Expenses	8,946	10,986	13,982	*16,204*	*18,044*
Research & Development	6,083	7,137	9,832	*11,307*	*12,211*
Other Operating Expense (Income)	—	—	—	—	—
Depreciation & Amortization (if reported separately)	—	—	—	—	—
Operating Income (ex charges)	**13,834**	**15,403**	**16,496**	***19,336***	***22,721***
Restructuring & Other Cash Charges	—	—	—	—	—
Impairment Charges (if reported separately)	—	—	—	—	—
Other Non-Cash (Income)/Charges	—	—	—	—	—
Operating Income (incl charges)	**13,834**	**15,403**	**16,496**	***19,336***	***22,721***
Interest Expense	—	—	—	—	—
Interest Income	635	496	763	*754*	*859*
Pre-Tax Income	**14,469**	**15,899**	**17,259**	***20,090***	***23,581***
Income Tax Expense	2,916	2,552	3,331	*3,817*	*4,952*
Other After-Tax Cash Gains (Losses)	-816	-427	516	—	—
Other After-Tax Non-Cash Gains (Losses)	—	—	—	—	—
(Minority Interest)	—	—	—	—	—
(Preferred Dividends)	—	—	—	—	—
Net Income	**10,737**	**12,920**	**14,444**	***16,273***	***18,629***
Weighted Average Diluted Shares Outstanding	665	678	676	*707*	*721*
Diluted Earnings Per Share	**16.16**	**19.07**	**21.37**	***23.02***	***25.84***
Adjusted Net Income	13,241	15,782	18,723	*21,099*	*24,222*
Diluted Earnings Per Share (Adjusted)	**19.92**	**23.29**	**27.70**	***29.85***	***33.59***
Dividends Per Common Share	—	—	—	—	—
EBITDA	**16,796**	**19,342**	**21,475**	***25,366***	***29,595***
Adjusted EBITDA	**16,796**	**19,342**	**21,475**	***25,366***	***29,595***

Alphabet Inc GOOGL (NAS) | ★★★

Last Price	Fair Value	Consider Buy	Consider Sell	Uncertainty	Economic Moat™	Moat Trend™	Stewardship	Industry Group
730.03 USD	755.00 USD	453.00 USD	1,170.25 USD	High	Wide	Stable	Standard	Online Media

Morningstar Analyst Forecasts

Balance Sheet (USD Mil)

Fiscal Year Ends in December	2012	2013	2014	*Forecast* *2015*	*2016*
Cash and Equivalents	48,088	58,717	64,395	*73,316*	*79,951*
Investments	—	—	—	—	—
Accounts Receivable	7,885	8,882	9,383	*10,715*	*12,215*
Inventory	505	426	—	—	—
Deferred Tax Assets (Current)	1,144	1,934	2,620	*2,620*	*2,620*
Other Short Term Assets	2,832	2,927	4,287	*4,287*	*4,287*
Current Assets	**60,454**	**72,886**	**80,685**	***90,938***	***99,073***
Net Property Plant, and Equipment	11,854	16,524	23,883	*28,354*	*32,480*
Goodwill	10,537	11,492	15,599	*17,599*	*19,599*
Other Intangibles	7,473	6,066	4,607	*4,607*	*4,607*
Deferred Tax Assets (Long-Term)	2,011	1,976	3,280	*3,280*	*3,280*
Other Long-Term Operating Assets	—	—	—	—	—
Long-Term Non-Operating Assets	1,469	1,976	3,079	*3,079*	*3,079*
Total Assets	**93,798**	**110,920**	**131,133**	***147,857***	***162,118***
Accounts Payable	2,012	2,453	1,715	*1,904*	*2,199*
Short-Term Debt	2,549	3,009	2,009	*2,009*	*2,009*
Deferred Tax Liabilities (Current)	240	24	96	*108*	*124*
Other Short-Term Liabilities	9,536	10,422	12,985	*12,985*	*12,985*
Current Liabilities	**14,337**	**15,908**	**16,805**	***17,006***	***17,317***
Long-Term Debt	2,988	2,236	3,228	*3,228*	*3,228*
Deferred Tax Liabilities (Long-Term)	1,872	1,947	1,971	*2,221*	*2,542*
Other Long-Term Operating Liabilities	2,146	2,777	3,511	*3,511*	*3,511*
Long-Term Non-Operating Liabilities	740	743	1,118	*1,118*	*1,118*
Total Liabilities	**22,083**	**23,611**	**26,633**	***27,084***	***27,716***
Preferred Stock	—	—	—	—	—
Common Stock	0	0	—	—	—
Additional Paid-in Capital	22,835	25,922	28,767	*28,767*	*28,767*
Retained Earnings (Deficit)	48,342	61,262	75,706	*91,979*	*110,608*
(Treasury Stock)	—	—	—	—	*-5,000*
Other Equity	538	125	27	*27*	*27*
Shareholder's Equity	**71,715**	**87,309**	**104,500**	***120,773***	***134,402***
Minority Interest	—	—	—	—	—
Total Equity	**71,715**	**87,309**	**104,500**	***120,773***	***134,402***

Alphabet Inc GOOGL (NAS) | ★★★

Last Price	Fair Value	Consider Buy	Consider Sell	Uncertainty	Economic Moat™	Moat Trend™	Stewardship	Industry Group
730.03 USD	755.00 USD	453.00 USD	1,170.25 USD	High	Wide	Stable	Standard	Online Media

Morningstar Analyst Forecasts

Cash Flow (USD Mil)

Fiscal Year Ends in December	2012	2013	2014	*Forecast 2015*	*Forecast 2016*
Net Income	10,737	12,920	14,444	*16,273*	*18,629*
Depreciation	1,988	2,781	3,523	*6,029*	*6,874*
Amortization	974	1,158	1,456	—	—
Stock-Based Compensation	2,504	2,862	4,279	*5,023*	*5,594*
Impairment of Goodwill	—	—	—	—	—
Impairment of Other Intangibles	—	—	—	—	—
Deferred Taxes	-266	-437	-104	*262*	*337*
Other Non-Cash Adjustments	-216	-594	-1,586	—	—
(Increase) Decrease in Accounts Receivable	-787	-1,307	-1,641	*-1,332*	*-1,501*
(Increase) Decrease in Inventory	301	-234	—	—	—
Change in Other Short-Term Assets	659	-295	742	—	—
Increase (Decrease) in Accounts Payable	-499	605	436	*189*	*296*
Change in Other Short-Term Liabilities	1,224	1,200	827	—	—
Cash From Operations	**16,619**	**18,659**	**22,376**	***26,445***	***30,228***
(Capital Expenditures)	-3,273	-7,358	-10,959	*-10,500*	*-11,000*
Net (Acquisitions), Asset Sales, and Disposals	-11,264	508	-5,729	*-2,000*	*-2,000*
Net Sales (Purchases) of Investments	1,481	-6,829	-4,367	—	—
Other Investing Cash Flows	—	—	—	—	—
Cash From Investing	**-13,056**	**-13,679**	**-21,055**	***-12,500***	***-13,000***
Common Stock Issuance (or Repurchase)	-99	-300	-1,421	—	*-5,000*
Common Stock (Dividends)	—	—	—	—	—
Short-Term Debt Issuance (or Retirement)	—	—	—	—	—
Long-Term Debt Issuance (or Retirement)	1,328	-557	-18	—	—
Other Financing Cash Flows	—	—	—	*-5,023*	*-5,594*
Cash From Financing	**1,229**	**-857**	**-1,439**	***-5,023***	***-10,594***
Exchange Rates, Discontinued Ops, etc. (net)	3	-3	-433	—	—
Net Change in Cash	**4,795**	**4,120**	**-551**	***8,921***	***6,634***

Alphabet Inc GOOGL (NAS) | ★★★

Last Price	Fair Value	Consider Buy	Consider Sell	Uncertainty	Economic Moat™	Moat Trend™	Stewardship	Industry Group
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Comparable Company Analysis

These companies are chosen by the analyst and the data are shown by nearest calendar year in descending market capitalization order.

Valuation Analysis

		Price/Earnings			EV/EBITDA			Price/Free Cash Flow			Price/Book			Price/Sales		
Company/Ticker	Price/Fair Value	2014	2015(E)	2016(E)	2014	2015(E)	2016(E)	2014	2015(E)	2016(E)	2014	2015(E)	2016(E)	2014	2015(E)	2016(E)
Apple Inc AAPL USA	0.73	15.6	12.0	11.2	9.7	7.7	7.5	11.8	8.8	10.3	5.3	5.2	3.4	3.2	2.6	2.4
Microsoft Corp MSFT USA	1.00	13.1	28.2	16.2	6.9	11.5	8.6	—	14.8	13.3	—	4.3	3.8	—	3.7	3.8
Facebook Inc FB USA	1.20	70.3	81.1	45.3	37.4	34.4	23.4	71.1	48.8	32.2	6.0	6.7	6.2	17.4	16.5	13.1
Yahoo! Inc YHOO USA	—	7.7	40.5	29.7	3.3	183.8	633.2	90.2	33.9	34.0	1.2	0.7	0.6	10.2	5.8	5.7
Twitter Inc TWTR USA	—	256.2	29.7	21.4	69.5	19.3	8.4	NM	111.7	25.1	6.4	3.6	3.6	16.4	5.1	3.7
Average		72.6	38.3	24.8	25.4	51.3	136.2	57.7	43.6	23.0	4.7	4.1	3.5	11.8	6.7	5.7
Alphabet Inc GOOGL US	**0.97**	**19.2**	**24.5**	**21.7**	**14.2**	**17.1**	**14.7**	**31.7**	**31.5**	**26.1**	**3.5**	**4.2**	**3.7**	**5.5**	**6.7**	**5.8**

Returns Analysis

		ROIC %			Adjusted ROIC %			Return on Equity %			Return on Assets %			Dividend Yield %		
Company/Ticker	Last Historical Year Total Assets (Mil)	2014	2015(E)	2016(E)	2014	2015(E)	2016(E)	2014	2015(E)	2016(E)	2014	2015(E)	2016(E)	2014	2015(E)	2016(E)
Apple Inc AAPL USA	— USD	102.3	119.8	95.6	110.1	133.0	105.8	33.6	46.3	35.1	18.0	20.5	15.9	1.9	1.9	2.2
Microsoft Corp MSFT USA	— USD	144.9	102.1	224.8	-973.4	-410.2	-395.6	—	14.4	27.7	13.9	7.0	13.3	3.1	2.9	2.1
Facebook Inc FB USA	— USD	18.2	11.7	23.6	41.2	33.0	72.1	11.5	9.1	13.0	10.2	8.2	11.5	—	—	—
Yahoo! Inc YHOO USA	61,960 USD	107.2	-3.8	-4.4	319.3	-10.9	-12.8	29.0	4.3	4.9	19.1	2.7	3.1	—	—	—
Twitter Inc TWTR USA	— USD	3.9	3.1	21.0	6.3	4.8	30.7	-17.6	-10.9	—	-12.9	-6.8	—	—	—	—
Average		75.3	46.6	72.1	-99.3	-50.1	-40.0	14.1	12.6	20.2	9.7	6.3	11.0	2.5	2.4	2.2
Alphabet Inc GOOGL US	**131,133** USD	**38.7**	**33.8**	**33.1**	**61.7**	**52.6**	**49.7**	**15.1**	**14.5**	**14.6**	**11.9**	**11.7**	**12.0**	**—**	**—**	**—**

Growth Analysis

		Revenue Growth %			EBIT Growth %			EPS Growth %			Free Cash Flow Growth %			Dividend/Share Growth %		
Company/Ticker	Last Historical Year Revenue (Mil)	2014	2015(E)	2016(E)	2014	2015(E)	2016(E)	2014	2015(E)	2016(E)	2014	2015(E)	2016(E)	2014	2015(E)	2016(E)
Apple Inc AAPL USA	182,795 USD	7.0	27.9	-3.4	7.2	35.7	-10.9	13.6	42.8	-6.3	2.1	52.2	-29.1	12.1	9.0	8.1
Microsoft Corp MSFT USA	86,833 USD	—	7.8	-0.2	—	1.6	7.5	266.1	-43.8	84.8	-10.0	-10.7	49.5	19.5	13.8	-23.2
Facebook Inc FB USA	12,466 USD	58.4	43.8	33.5	78.1	24.7	57.7	87.3	15.9	89.5	-60.5	346.0	158.9	—	—	—
Yahoo! Inc YHOO USA	4,618 USD	-1.3	2.5	2.8	NM	-94.9	3.0	1,248.3	-89.1	36.5	-513.8	-178.5	-10.0	—	—	—
Twitter Inc TWTR USA	1,403 USD	111.0	61.6	36.4	-15.3	-1.1	-105.8	-160.1	302.7	38.3	24.0	-30.8	-84.0	—	—	—
Average		43.8	28.7	13.8	23.3	-6.8	-9.7	291.0	45.7	48.6	-111.6	35.6	17.1	15.8	11.4	-7.6
Alphabet Inc GOOGL US	**66,001** USD	**18.9**	**14.2**	**14.0**	**7.1**	**17.2**	**17.5**	**18.9**	**7.8**	**12.6**	**-90.7**	**947.7**	**31.8**	**—**	**—**	**—**

Alphabet Inc GOOGL (NAS) | ★★★

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Comparable Company Analysis

These companies are chosen by the analyst and the data are shown by nearest calendar year in descending market capitalization order.

Profitability Analysis

		Gross Margin %			EBITDA Margin %			Operating Margin %			Net Margin %			Free Cash Flow Margin %		
Company/Ticker	Last Historical Year Net Income (Mil)	2014	2015(E)	2016(E)	2014	2015(E)	2016(E)	2014	2015(E)	2016(E)	2014	2015(E)	2016(E)	2014	2015(E)	2016(E)
Apple Inc AAPL USA	39,510 USD	38.6	40.1	39.3	33.1	35.3	33.3	28.7	30.5	28.1	21.6	22.9	21.4	27.4	30.0	22.9
Microsoft Corp MSFT USA	21,930 USD	—	64.7	65.8	37.8	25.8	36.2	32.0	30.1	32.4	25.3	13.0	25.6	—	24.7	28.6
Facebook Inc FB USA	2,955 USD	82.7	84.0	85.0	43.5	45.6	53.0	40.1	34.7	41.0	23.7	20.5	37.6	24.5	33.9	40.8
Yahoo! Inc YHOO USA	6,582 USD	71.9	61.0	61.0	244.9	2.6	0.7	231.8	11.6	11.6	142.5	14.4	19.3	11.4	17.2	16.6
Twitter Inc TWTR USA	101 USD	68.2	68.0	70.0	21.5	22.0	37.2	-38.4	-23.5	1.0	7.2	19.2	19.5	-8.5	4.6	14.9
Average		65.4	63.6	64.2	76.2	26.3	32.1	58.8	16.7	22.8	44.1	18.0	24.7	13.7	22.1	24.8
Alphabet Inc GOOGL US	**18,723** USD	**61.1**	**62.2**	**61.7**	**32.5**	**33.7**	**34.4**	**25.0**	**25.7**	**26.4**	**28.4**	**28.0**	**28.2**	**17.3**	**21.2**	**22.4**

Leverage Analysis

		Debt/Equity %			Debt/Total Cap %			EBITDA/Interest Exp.			Total Debt/EBITDA			Assets/Equity		
Company/Ticker	Last Historical Year Total Debt (Mil)	2014	2015(E)	2016(E)	2014	2015(E)	2016(E)	2014	2015(E)	2016(E)	2014	2015(E)	2016(E)	2014	2015(E)	2016(E)
Apple Inc AAPL USA	35,295 USD	31.6	54.0	34.3	24.0	35.1	25.6	140.6	112.5	64.7	0.6	0.8	0.7	2.1	2.4	2.0
Microsoft Corp MSFT USA	22,645 USD	25.2	41.0	31.4	20.1	29.1	23.9	26.1	—	136.9	0.7	1.4	0.9	—	2.2	2.0
Facebook Inc FB USA	— USD	—	—	—	—	—	—	64.6	263.5	409.2	—	—	—	1.1	1.1	1.1
Yahoo! Inc YHOO USA	1,170 USD	3.0	2.9	2.8	2.9	2.8	2.7	—	—	—	0.1	9.4	32.4	1.6	1.6	1.5
Twitter Inc TWTR USA	1,607 USD	44.3	49.4	49.4	30.7	33.1	33.1	7.6	8.4	19.3	5.3	3.2	1.4	1.5	1.7	1.7
Average		26.0	36.8	29.5	19.4	25.0	21.3	59.7	128.1	157.5	1.7	3.7	8.9	1.6	1.8	1.7
Alphabet Inc GOOGL US	**5,237** USD	**5.0**	**4.3**	**3.9**	**4.8**	**4.2**	**3.8**	**—**	**—**	**—**	**0.2**	**0.2**	**0.2**	**1.3**	**1.2**	**1.2**

Liquidity Analysis

		Cash per Share			Current Ratio			Quick Ratio			Cash/Short-Term Debt			Payout Ratio %		
Company/Ticker	Market Cap (Mil)	2014	2015(E)	2016(E)	2014	2015(E)	2016(E)	2014	2015(E)	2016(E)	2014	2015(E)	2016(E)	2014	2015(E)	2016(E)
Apple Inc AAPL USA	535,607 USD	25.35	35.50	41.13	3.13	3.14	3.88	3.10	3.11	3.85	24.61	18.70	65.73	28.2	21.5	24.8
Microsoft Corp MSFT USA	411,284 USD	1.03	0.68	4.12	2.50	2.50	2.91	2.45	2.44	2.85	4.33	1.12	26.38	40.5	81.1	30.8
Facebook Inc FB USA	314,486 USD	4.20	6.46	6.96	9.60	11.25	11.86	9.60	11.25	11.86	—	—	—	—	—	—
Yahoo! Inc YHOO USA	27,528 USD	10.18	11.38	11.90	2.63	2.71	2.85	2.63	2.71	2.85	—	—	—	—	—	—
Twitter Inc TWTR USA	11,549 USD	2.13	1.15	0.99	10.81	7.11	5.72	10.81	7.11	5.72	13.45	7.78	6.74	—	—	—
Average		8.58	11.03	13.02	5.73	5.34	5.44	5.72	5.32	5.43	14.13	9.20	32.95	34.4	51.3	27.8
Alphabet Inc GOOGL US	**502,060** USD	**95.27**	**103.72**	**110.88**	**4.80**	**5.35**	**5.72**	**4.80**	**5.35**	**5.72**	**32.05**	**36.49**	**39.80**	**—**	**—**	**—**

Research Methodology for Valuing Companies

Components of Our Methodology

- Economic Moat™ Rating
- Moat Trend™ Rating
- Moat Valuation
- Three-Stage Discounted Cash Flow
- Weighted Average Cost of Capital
- Fair Value Estimate
- Scenario Analysis
- Uncertainty Ratings
- Margin of Safety
- Consider Buying/Selling
- Stewardship Rating

We believe that a company's intrinsic worth results from the future cash flows it can generate.
The Morningstar Rating for stocks identifies stocks trading at a discount or premium to their intrinsic worth—or fair value estimate, in Morningstar terminology. Five-star stocks sell for the biggest risk-adjusted discount to their fair values, whereas 1-star stocks trade at premiums to their intrinsic worth. Four key components drive the Morningstar rating: our assessment of the firm's economic moat, our estimate of the stock's fair value, our uncertainty around that fair value estimate and the current market price. This process ultimately culminates in our single-point star rating. Underlying this rating is a fundamentally focused methodology and a robust, standardized set of procedures and core valuation tools used by Morningstar's equity analysts.

The concept of the Morningstar Economic Moat™ Rating plays a vital role not only in our qualitative assessment of a firm's investment potential, but also in our actual calculation of our fair value estimates. We assign three moat ratings—none, narrow, or wide—as well as the Morningstar Moat Trend™ Rating—positive, stable, or negative—to each company we cover. Companies with a narrow moat are those we believe are more likely than not to achieve normalized excess returns on invested capital over at least the next 10 years. Wide-moat companies are those in which we have very high confidence that excess returns will remain for 10 years, with excess returns more likely than not to remain for at least 20 years. The longer a firm generates economic profits, the higher its intrinsic value. The assumptions that we make about a firm's economic moat play a vital role in determining the length of "economic outperformance" that we assume in the terminal sections of our valuation model. To assess the sustainability of excess profits, analysts perform ongoing assessments of what we call the moat trend. A firm's moat trend is positive in cases where we think its sources of competitive advantage are growing stronger; stable where we don't anticipate changes to competitive advantages over the next several years; or negative when we see signs of deterioration.

At the heart of our valuation system is a detailed projection of a company's future cash flows. The first stage of our three-stage discounted cash flow model can last from 5 to 10 years and contains numerous detailed assumptions about various financial and operating items. The second stage of our model—where a firm's return on new invested capital (RONIC) and earnings growth rate implicitly fade until the perpetuity year—can last anywhere from one year (for companies with no economic moat) to 10-15 years (for wide-moat companies). In our third stage, we assume the firm's RONIC equals its weighted average cost of capital, and we calculate a continuing value using a standard perpetuity formula. In deciding on the rate at which to discount future cash flows, we use a building block approach,

Morningstar Research Methodology for Valuing Companies

Economic Moat
Financial Health
Stewardship
Uncertainty
Moat Trend

Morningstar Fair Value

Margin of Safety
Market Pricing

Morningstar Rating™ For Stocks
★★★★★

Source: Morningstar, Inc.

Detailed Methodology Documents and Materials*

- Comprehensive Equity Research Methodology
- Uncertainty Methodology
- Cost of Equity Methodology
- Morningstar DCF Valuation Model
- Stewardship Rating Methodology

*Please contact a sales representative for more information.

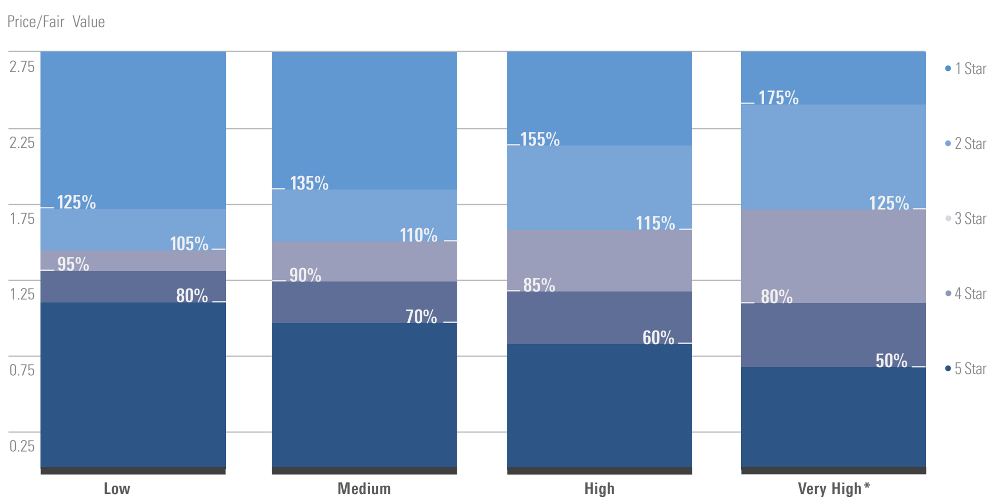
which takes into account expectations for market real return, inflation, country risk premia, corporate credit spread, and any additional systematic risk.

We also employ a number of other tools to augment our valuation process, including scenario analysis, where we assess the likelihood and performance of a business under different economic and firm-specific conditions. Our analysts model three scenarios for each company we cover, stress-testing the model and examining the distribution of resulting fair values.

The Morningstar Uncertainty Rating captures the range of likely potential fair values and uses it to assign the margin of safety required before investing, which in turn explicitly drives our stock star rating system. The Uncertainty Rating represents the analysts' ability to bound the estimated value of the shares in a company around the Fair Value Estimate, based on the characteristics of the business underlying the stock, including operating and financial leverage, sales sensitivity to the overall economy, product concentration, pricing power, and other company-specific factors.

Our corporate Stewardship Rating represents our assessment of management's stewardship of shareholder capital, with particular emphasis on capital allocation decisions. Analysts consider companies' investment strategy and valuation, financial leverage, dividend and share buyback policies, execution, compensation, related party transactions, and accounting practices. Corporate governance practices are only considered if they've had a demonstrated impact on shareholder value. Analysts assign one of three ratings: "Exemplary," "Standard," and "Poor." Analysts judge stewardship from an equity holder's perspective. Ratings are determined on an absolute basis. Most companies will receive a Standard rating, and this is the default rating in the absence of evidence that managers have made exceptionally strong or poor capital allocation decisions. M

Morningstar Margin of Safety and Star Rating Bands



* Occasionally a stock's uncertainty will be too high for us to estimate, in which case we label it Extreme.

Source: Morningstar, Inc.

Alphabet Inc GOOGL (NAS) | ★★★

Last Price	Fair Value	Consider Buy	Consider Sell	Uncertainty	Economic Moat™	Moat Trend™	Stewardship	Industry Group
730.03 USD	755.00 USD	453.00 USD	1,170.25 USD	High	Wide	Stable	Standard	Online Media

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Alphabet Inc GOOGL (NAS) | ★★★

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