Alphabet Inc. (GOOGL)

$1,441.10 (As of 06/25/20)

Price Target (6-12 Months): **$1,513.00**

Long Term: 6-12 Months	**Zacks Recommendation:** (Since: 02/17/19) Prior Recommendation: Outperform	**Neutral**
Short Term: 1-3 Months	**Zacks Rank:** (1-5)	**3-Hold**
	Zacks Style Scores:	VGM:D
	Value: C | Growth: C | Momentum: D	

Summary

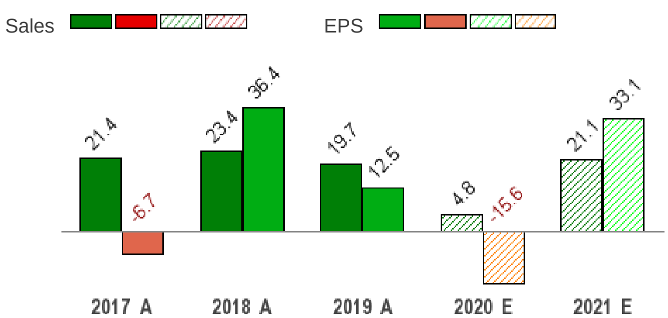
Alphabet's strengthening cloud unit is aiding substantial revenue growth. Moreover, expanding data centers will continue to bolster its presence in the cloud space. Further, major updates in its search segment are enhancing the search results, which is a major positive. Moreover, Google's robust mobile search is gaining solid momentum. Additionally, strong focus on innovation of AI techniques and the home automation space should aid business growth in the long term. Further, its deepening focus on wearables category remains a tailwind. Notably, the stock has outperformed its industry over a year. However, the company's growing litigation issues and increasing expenses might hurt profitability.

Price, Consensus & Surprise

Data Overview

52 Week High-Low	**$1,530.74 - $1,008.87**
20 Day Average Volume (sh)	**1,670,821**
Market Cap	**$983.7 B**
YTD Price Change	**7.6%**
Beta	**1.07**
Dividend / Div Yld	**$0.00 / 0.0%**
Industry	**Internet - Services**
Zacks Industry Rank	**Top 27% (69 out of 253)**
Last EPS Surprise	**-5.1%**
Last Sales Surprise	**3.4%**
EPS F1 Est- 4 week change	**0.0%**
Expected Report Date	**07/23/2020**
Earnings ESP	**0.0%**
P/E TTM	**29.1**
P/E F1	**34.8**
PEG F1	**2.0**
P/S TTM	**5.9**

Sales and EPS Growth Rates (Y/Y %)



Sales Estimates (millions of $)

	Q1	Q2	Q3	Q4	Annual*
2021	38,394 E	39,184 E	41,416 E	47,881 E	167,156 E
2020	33,707 A	30,417 E	33,462 E	40,437 E	138,075 E
2019	29,479 A	31,706 A	33,009 A	37,574 A	131,768 A

EPS Estimates

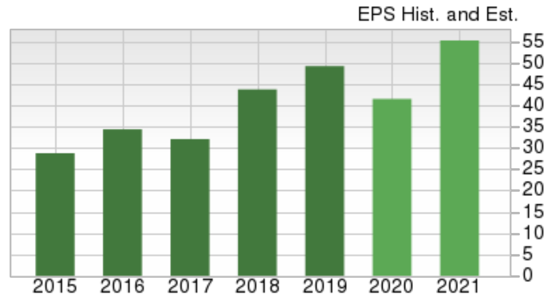
	Q1	Q2	Q3	Q4	Annual*
2021	$12.60 E	$12.52 E	$13.51 E	$14.86 E	$55.18 E
2020	$9.87 A	$8.24 E	$10.39 E	$12.83 E	$41.47 E
2019	$11.90 A	$14.21 A	$10.12 A	$15.35 A	$49.16 A

*Quarterly figures may not add up to annual.

The data in the charts and tables, including the Zacks Consensus EPS and Sales estimates, is as of 06/25/2020. The reports text is as of 06/26/2020.

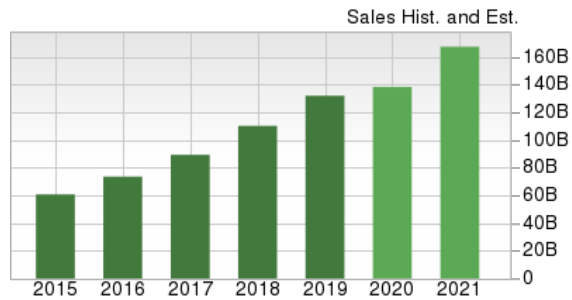
Overview

Alphabet is one of the most innovative companies in the modern technological age. Over the last few years, the company has evolved from primarily being a search-engine provider to cloud computing, ad-based video and music streaming, autonomous vehicles, healthcare providers and others.



In the online search arena, Google is a monopoly with more than 94% of the online search volume and market. Over the years, the company has witnessed increase in search queries, resulting from ongoing growth in user adoption and usage, primarily on mobile devices, continued growth in advertiser activity, and improvements in ad formats.

The company is gaining market share in the cloud-computing, driven by continued strength in Google Cloud Platform and G Suite offerings.



Alphabet also enjoys a dominant position in the autonomous vehicles market, thanks to Waymo's relentless efforts. Also, it has bolstered its footprint in the healthcare industry with its life science divison, Verily.

The company has also become a renowned name in the world of entertainment. YouTube came up with $15.15 billion advertising revenues in 2019.

Total revenues were $161.9 billion in 2019. The company reports revenues under two broad heads, Google and Other Bets, which generated 99% and 1% of total revenues, respectively.

The Google segment includes products such as ads, Android, Chrome, hardware, Google Cloud, Google Maps, Google Play, Search and YouTube.

The Other Bets segment includes Access, Calico, CapitalG, GV, Verily, Waymo and X, among others.

Alphabet has many competitors in the form of internet pioneers, streaming platforms, technology giants, cloud computing and customet relatioship companies.

Reasons To Buy:

- Alphabet has been showing **increased appetite in the Home Assistant space**. The company made its foray into this market in 2016 with the launch of Google Home. Google Home performs an array of tasks such as playing music, reading books, managing calendars, answering queries, searching places, calling over cabs, controlling smart home devices and so on. It runs on Google's new voice assistant. As voice is being seen as the next big thing in computer interaction, these products could help Google expand its revenue going forward. As per Gartner, 3.3% of global households are expected to adopt a VPA-enabled wireless speaker by 2020. The strong growth projection for the personal assistant market is a key growth catalyst for Google. As a booming future is being predicted for the home assistant market, Google's home assistant devices could quite well add to their top and bottom-line figures going forward.

Google has shown good execution to date. Its dominant search market share is a positive. Its focus on innovation, strategic acquisitions and Android OS should continue to generate strong cash flow.

- Google has entered into a definitive agreement to acquire wearable fitness company Fitbit for roughly $2.1 billion. The move ramps up competition in the wearables space. Google has substantially invested in artificial intelligence. Fitbit, with 28 million users worldwide, is likely to be a very good fit for Google. Also, the Fitbit acquisition gives Google a bridge to the $3 trillion health care market. The buyout expands Google's presence in the lucrative health care market, as it can provide valuable insights to medical professionals about broader health trends.

- Alphabet focuses on **innovation**, launching products and services for multiple industries. The development and enhancements of its search technology over time has created win-win situations wherein buyers, sellers and the public at large were benefited. The success of this strategy led to very strong growth since inception. But Google has continued to adapt and change on the strength of its technological prowess. Not only did it take the mobile market transition in its stride, but it also started developing machine learning and artificial intelligence for a time in the future when the intricacies of human behavior would require even more accurate patterns. As a result, it was able to turn over some search functions to its AI systems. Because Alphabet generates significant cash from operations and also holds a huge cash balance, management has the flexibility to pursue growth in any area that exhibits true potential. This flexibility, along with its technological prowess allowed it to pursue opportunities in different markets until it became necessary to restructure itself into a conglomerate. Some of the innovations outside the core search business include technology for high-speed Internet (its Fiber and Balloon initiatives), healthcare, genomics, self-driving cars, drones, glass and others. We believe that the company has the financial muscle to overcome any short-term adverse conditions to continue pursuing these initiatives.

- Google has been growing rapidly in this **fast-growing highly-competitive cloud market**. The company has signed many partnerships and has been opening data centers to extend its cloud footprint worldwide. Alphabet and Cisco announced a partnership per which the duo will deliver an open hybrid cloud solution. The solution will enable usage and management of applications and services across on-premises setups and the Google Cloud Platform. These partnerships will help Google to keep its position in the computing race

- The **Google search** engine is advanced, simple and adaptable, all at once. This is the main reason for its leading search market share. A January 2020 global desktop search market share report from netmarketshare.com stated that Google had 74.1% of market share, followed by 12.7% for Baidu, 7.9% for Bing and 3.6% for Yahoo. In mobile, Google was even more dominant than Baidu and Bingwith a 94.9% share of the search market globally. Market leader Alphabet has held its own despite concerted efforts by competitors to grab share. Google is the dominant search engine in Canada, Latin America and most Asia/Pacific countries. It is also the dominant search engine in Europe, with leading market shares in the U.K., France, Germany and Spain. Alphabet's increasing push into wearables and Google Now are positives for search revenue growth.

- Although the desktop was the most popular computing device in the past, **mobile search** is now equally if not more popular. That is because there is a growing tendency among users to look for information at the exact time the need arises, whether it's about a cup of coffee or a new home. The plethora of mobile Internet devices that are making their way to the market is making it easier on the device front. And Alphabet is helping the process with initiatives like its Mobile Friendly algorithm change, product listings, flight search, Google Now and the Chrome browser. Alphabet's opportunity lies in consumers and enterprises choosing mobile over desktops and the billions of new users entering the market, especially in the emerging regions. While it's blocking by the Chinese government pushed search market share to local player Baidu, it's also true that the growing number of local players is resulting in stiff competition in China, eating into their individual profits.

- Online and mobile video consumption is soaring and Alphabet remains strongly positioned here with the **YouTube platform**. In its race to target TV ad dollars, Alphabet allowed third-party (Nielsen and comScore) tagging of YouTube videos to determine the effectiveness of ads on YouTube versus ads shown on TV. The Google Preferred program pulls out the top 5% of the most engaging content on YouTube for advertisers. Alphabet has also promised to advertise this content itself in order to boost traffic. So Google Preferred is attracting spending on the platform. Mobile revenue on YouTube continues to grow and TrueView (where advertisers pay only when consumers see the ad) also continues to do well.

Reasons To Sell:

Alphabet's diversification strategy involves significant investment in mobile, cloud, devices and digital goods. Growing competition and legal hassles are other headwinds.

- Alphabet faces significant **litigation** all over the world as a result of its dominant position in search. Regulatory scrutiny continues to worsen with the competition commission issuing several statements of objections (which precedes judicial proceedings unless settled). Google's alleged wrong doing constitutes the leveraging of Android to unfairly promote its own search service with the compulsory pre-installation of its app bundle.

- Alphabet is likely to see an **escalation in costs.** The company is targeting new technologies and markets, which generally require increased spending. Google has focused on sales and marketing (S&M expenses were around 9.5% of sales in 2017, going up to around 12% in each of the next five years). This greatly increased its brand value, indicating that it has captured mind share. Whether this will convert to revenue will be seen from the growth in its new device and digital sales .R&D has also increased steadily over the same time period as Google invests in future growth. Management has said however that the Other Bets segment, particularly Alphabet'sFiber initiative would require additional capex investments this year. If fixed costs increase without a corresponding increase in revenue, margins could continue to trend down, particularly since revenue growth has moderated in the last three years.

- There are also **some other margin pressures**. The most significant at the moment is related to currency, which continued to impact Alphabet's results in the last quarter despite the fact that it has a hedging program in place. Other pressures include fast-paced international growth, a growing volume of lower-priced YouTube clicks and the strength on the mobile platform.

- Alphabet has made numerous attempts to build a position in the **social segment**. This is because social networking through websites, such as Facebook and Twitter are places where people are sharing a lot of personal information and preferences that may be used to develop more customized results and thereby enable better targeting of advertisements. The fact that people are spending more time on social networks means that they are spending less time on the browser. This tends to reduce traffic to Alphabet search services although Alphabet is still unparalleled in search. So far, Alphabet's attempts have all been flops, so social networks, particularly Facebook has really grown. Alphabet doesn't have a good social platform to boost the amount of location-based commerce it generates through mobile devices.

Last Earnings Report

Alphabet Q1 Earnings Miss, Revenues Beat Estimates

Quarter Ending	03/2020
Report Date	Apr 28, 2020
Sales Surprise	3.44%
EPS Surprise	-5.10%
Quarterly EPS	9.87
Annual EPS (TTM)	49.55

Alphabet Inc.'s non-GAAP earnings of $9.87 per share in first-quarter 2020 missed the Zacks Consensus Estimate of $10.97. Also, earnings decreased 35.7% sequentially and 17.1% year over year.

Net revenues — excluding total traffic acquisition cost or TAC (TAC is the portion of revenues shared with Google's partners, and amounts paid to distribution partners and others who direct traffic to the Google website) — came in at $33.7 billion. The figure was down 11.5% sequentially but up 14.3% year over year.

Net revenues outpaced the Zacks Consensus Estimate by 3.4%, driven by strength in the company's cloud and YouTube businesses.

Following weaker-than-expected advertising revenues in the first quarter, Alphabet's share price was down approximately 3%. The decrease in advertising revenues was due to the outbreak of the coronavirus pandemic, which in turn resulted in a decline in consumer and business spending.

Notably, primary drivers of the Google business haven't changed. Yet, pricing remains under pressure, both on account of nagging FX concerns, and continued strength in mobile and TrueView.

Nonetheless, Google continues to enjoy strength in the cloud business. The company's Google Cloud recorded 52.1% year-over-year revenue growth in the quarter. It is to be noted that the firm will continue to invest in this space.

YouTube remains a strong contributor to the company's growth. More than a thousand creators are currently engaged in the platform, bringing in a thousand subscribers every day. However, time and again it faces continuous pressure from advertisers to tighten controls on the fast-growing YouTube video service, in a bid to avoid adult or offensive content.

Numbers in Detail

Revenues

Gross total revenues of $41.2 billion decreased 10.7% sequentially but increased 13.3% year over year (up 15% in constant currency). The increase reflects strong demand for the company's search, YouTube and cloud.

Google Segment

The segment includes search, advertising, Play, hardware, and Cloud & Apps.

Beginning fourth quarter, Alphabet disaggregated revenue segments, including Search, YouTube ads and Cloud.

Coming to the search business, revenues from Google-owned and partner sites grew 11.6% and 4.1% year over year, accounting for 69.3% and 12.7% of quarterly revenues, respectively. This resulted in a year-over-year increase of 10.4% in total advertising revenues.

YouTube grew 33.4% year over year to $4 billion, accounting for 9.8% of quarterly revenues. Google other revenues — which consists of YouTube non-advertising revenues — were $4.4 billion in the first quarter, up 22.5% year over year.

In addition, Google cloud grew 52.1% year over year to $2.8 billion, accounting for 6.7% of quarterly revenues.

Other Bets Segment

Other Bets revenues were $135 million, down 21.5% sequentially and 20.6% year over year, accounting for 0.3% of total first-quarter revenues.

Total traffic acquisition cost or TAC was down 12.3% sequentially but up 8.6% year over year.

Operating Results

Operating margin was 19.4%, up 120 basis points from the year-ago quarter.

Operating expenses (including research and development, sales and marketing, as well as general and administrative expenses) were $14.2 billion, up 18.1% from the year-ago quarter.

The increase in expenses was a result of heavy investment in the cloud-computing business, artificial intelligence and consumer hardware, among others.

Balance Sheet

At the end of the first quarter, Alphabet had a solid balance sheet, with cash & cash equivalents, and marketable securities of $117.2 billion, down from $119.7 billion in the comparable prior-quarter period.

The company generated $11.5 billion cash from operations in the first quarter and spent $6 billion on capex, netting a free cash flow of $5.4 billion.

Recent News

On **Jun 26, 2020,** Alphabet's Waymo teams with Volvo to develop a self-driving electric vehicles. Per the deal, Volvo will design and manufacture the vehicles, while Waymo will work on the artificial intelligence and certain hardware, including cameras, lidar and radar.

On **Jun 17, 2020,** Alphabet's division Google and France-based grocery retailer, Carrefour has launched a new voice-based grocery shopping service in France. The service will allow customers to voice order groceries with the help of the Google Assistant. It is a digital voice assistance service that is available on smartphones, compatible smart speakers and connected screens.

On **Jun 3, 2020**, Alphabet's self-driving project, Waymo will reportedly relaunch its fleet of self-driving minivans, taking into account all safety measures. The tests will resume in the roads of San Francisco Bay Area starting Jun 8, which almost came to a halt in March because of the COVID-19 pandemic. Reportedly, these self-driving cars will currently not be used for any commercial purposes. These vans will deliver packages, including art kit deliveries for local children and services for the Blind and Visually Impaired.

On **Jun 2, 2020,** Alphabet's division Google faces fresh allegations regarding privacy of the users. A lawsuit of $5 billion has been filed in the federal court of San Jose, CA against the company for illegally tracking the Internet activities of users via the Incognito mode to collect data from their browsing sites and what they view online. Notably, Incognito mode is known for allowing users to search through Google Chrome in private without getting their browsing history recorded.

On **May 29, 2020,** Alphabet's division Google is reportedly in early stages of talks with the British telecom company, Vodafone, to acquire 5% stake in the latter's India business unit – Vodafone Idea.

On **May 21, 2020,** Alphabet's division Google unveiled Action Blocks app for the Android users on the Global Accessibility Awareness Day. The app is now available on Play Store for free. It allows users to create shortcuts to various apps on the home screen of the smartphone, thus making those apps easily accessible.

On **May 21, 2020,** Alphabet's Google and Apple released the initial version of their COVID-19 contact-tracing app. The companies said that authorities of 23 countries across five continents have sought access to their contact-tracing technology.

On **May 13, 2020,** Alphabet partnered with Vodacom, an Africa-based mobile network operator. Per the partnership, Loon's Internet beaming balloons will be leveraged by Vodacom to offer mobile network access to un-served and under-served parts of Mozambique — Cabo Delgado and Niassa provinces.

On **Apr 6, 2020,** Google collaborated with researchers from the University of Southampton in the U.K. to help people track the spread of coronavirus using anonymized and aggregated location data.

On **March 27, 2020,** Alphabet's Google announced that it will donate more than $800 million to produce medical supplies in an effort to fight COVID-19.

On **Mar 20, 2020,** Alphabet's Google launched a website in the United States to bring in more awareness among people about the highly contagious virus.
The website offers information related to coronavirus symptoms, treatment and preventive remedies from the World Health Organization. It consists of resources and links that are solely focused on the potentially respiratory illness COVID-19.

On **Mar 5, 2020**, Alphabet's Google Cloud joined forces with AT&T to integrate latter's 5G network into its cloud offerings. Google Cloud aims to leverage AT&T's 5G network to build a suite of business products, which will offer low latency and strong security to the companies.

On **Mar 4, 2020**, Alphabet's division Google announced that it is opening a second development studio for Stadia that will be located in Playa Vista, CA. It will be led by Shannon Studstill, who was formerly the head of the respected Santa Monica Studio that developed the God of War franchise for Sony.

On **Mar 4, 2020**, Alphabet's Google Cloud revealed its intentions to open four new regions in Delhi, Doha, Melbourne and Toronto. All of them will have three zones, which will offer lower latency to nearby users.

On **Mar 2, 2020**, Alphabet's self-driving project, Waymo, raised $2.25 billion in funding from the outside investors including Silver Lake Management, Canada Pension Plan Investment Board and Magna International, for the first time.

Valuation

Alphabet shares are up 7.6% in the year-to-date period and 33.9% over the trailing 12-month period. Stocks in the Zacks sub-industry and the Zacks Computer & Technology sector are up 11% and 9.2% in the year-to-date period, respectively. Over the past year, the Zacks sub-industry is up 11.4% and the sector is up 22.6%.

The S&P 500 index is down 5.2% in the year-to-date period but up 4.5% in the past year.

The stock is currently trading at 29.95X forward 12-month earnings, which compares to 32.75X for the Zacks sub-industry, 25.24X for the Zacks sector and 21.87X for the S&P 500 index.

Over the past five years, the stock has traded as high as 33.78X and as low as 19.09X, with a 5-year median of 25.29X. Our Neutral recommendation indicates that the stock will perform in-line with the market. Our $1,513 price target reflects 21.9X forward 12-month earnings.

The table below shows summary valuation data for GOOGL

Valuation Multiples - GOOGL				
	Stock	Sub-Industry	Sector	S&P 500

P/E F 12M	Current	29.95	32.75	25.24	21.87
	5-Year High	33.78	43.52	25.24	22.11
	5-Year Low	19.09	22.39	16.72	15.23
	5-Year Median	25.29	34.85	19.28	17.49
P/S F12M	Current	6.22	6.17	3.52	3.3
	5-Year High	8.54	14.07	3.59	3.44
	5-Year Low	4.59	5.02	2.32	2.54
	5-Year Median	6.62	9.53	3.1	3.01
EV/EBITDA TTM	Current	16.85	18.31	11.38	10.76
	5-Year High	20.75	36.58	12.85	12.87
	5-Year Low	12.14	9.99	7.56	8.27
	5-Year Median	16.85	22.71	10.63	10.78

As of 06/25/2020

Industry Analysis **Zacks Industry Rank:** Top 27% (69 out of 253)

Top Peers

Company (Ticker)	Rec	Rank
Apple Inc. **(AAPL)**	Neutral	3
Amazon.com, Inc. **(AMZN)**	Neutral	3
Alibaba Group Holding Limited **(BABA)**	Neutral	3
Facebook, Inc. **(FB)**	Neutral	3
Microsoft Corporation **(MSFT)**	Neutral	3
Yelp Inc. **(YELP)**	Neutral	3
Yandex N.V. **(YNDX)**	Neutral	3
Baidu, Inc. **(BIDU)**	Underperform	3

Industry Comparison Industry: Internet - Services

	GOOGL	X Industry	S&P 500	Industry Peers AMZN	BIDU	YNDX
Zacks Recommendation (Long Term)	Neutral	-	-	Neutral	Underperform	Neutral
Zacks Rank (Short Term)	3	-	-	3	3	3
VGM Score	D	-	-	D	D	D
Market Cap	983.72 B	688.16 M	21.24 B	1,373.92 B	42.79 B	16.41 B
# of Analysts	12	3	14	13	2	5
Dividend Yield	0.00%	0.00%	1.97%	0.00%	0.00%	0.00%
Value Score	C	-	-	F	D	C
Cash/Price	0.12	0.16	0.07	0.04	0.49	0.17
EV/EBITDA	17.16	1.48	12.51	36.08	9.73	30.59
PEG Ratio	1.99	2.72	2.87	5.62	2.72	1.72
Price/Book (P/B)	4.84	2.69	2.90	21.05	1.79	5.52
Price/Cash Flow (P/CF)	20.75	17.35	11.34	41.08	9.24	28.18
P/E (F1)	34.75	32.44	20.76	137.57	19.03	55.79
Price/Sales (P/S)	5.90	2.62	2.18	4.64	2.83	5.87
Earnings Yield	2.88%	0.81%	4.55%	0.73%	5.25%	1.80%
Debt/Equity	0.08	0.09	0.77	0.36	0.35	0.40
Cash Flow ($/share)	69.45	0.09	7.01	67.05	13.39	1.79
Growth Score	C	-	-	C	D	C
Hist. EPS Growth (3-5 yrs)	23.83%	20.66%	10.84%	102.38%	7.34%	18.26%
Proj. EPS Growth (F1/F0)	-15.64%	-9.05%	-10.73%	-12.98%	-13.10%	-20.53%
Curr. Cash Flow Growth	12.62%	9.70%	5.46%	31.33%	-9.22%	15.59%
Hist. Cash Flow Growth (3-5 yrs)	19.91%	19.91%	8.55%	49.26%	10.85%	7.26%
Current Ratio	3.66	1.68	1.29	1.08	2.95	4.78
Debt/Capital	7.07%	12.02%	45.14%	26.42%	26.26%	31.80%
Net Margin	20.71%	-6.44%	10.53%	3.56%	2.49%	7.93%
Return on Equity	17.43%	-5.36%	16.06%	17.83%	8.69%	11.39%
Sales/Assets	0.62	0.62	0.55	1.42	0.35	0.64
Proj. Sales Growth (F1/F0)	4.79%	0.00%	-2.70%	24.13%	2.20%	-1.89%
Momentum Score	D	-	-	C	D	F
Daily Price Chg	0.59%	0.00%	0.93%	0.74%	1.94%	0.50%
1 Week Price Chg	0.83%	0.00%	0.92%	5.11%	5.86%	8.16%
4 Week Price Chg	1.61%	9.22%	-1.04%	14.72%	16.38%	24.39%
12 Week Price Chg	29.01%	28.70%	22.12%	43.56%	24.24%	55.01%
52 Week Price Chg	33.85%	-14.29%	-8.70%	44.65%	6.63%	30.15%
20 Day Average Volume	1,670,821	217,095	2,782,477	3,843,345	4,010,617	2,700,010
(F1) EPS Est 1 week change	0.00%	0.00%	0.00%	0.00%	0.00%	-3.66%
(F1) EPS Est 4 week change	0.00%	0.00%	0.00%	1.40%	0.00%	-3.92%
(F1) EPS Est 12 week change	-15.21%	-10.53%	-12.23%	-26.97%	-40.26%	-31.17%
(Q1) EPS Est Mthly Chg	0.00%	0.00%	0.00%	4.51%	0.00%	0.00%

Zacks Stock Rating System

We offer two rating systems that take into account investors' holding horizons: Zacks Rank and Zacks Recommendation. Each provides valuable insights into the future profitability of the stock and can be used separately or in combination with each other depending on your investment style.

Zacks Recommendation

The Zacks Recommendation aims to predict performance over the next 6 to 12 months. The foundation for the quantitatively determined Zacks Recommendation is trends in the company's estimate revisions and earnings outlook. The Zacks Recommendation is broken down into 3 Levels; Outperform, Neutral and Underperform. Unlike many Wall Street firms, we have an excellent balance between the number of Outperform and Neutral recommendations. Our team of 70 analysts are fully versed in the benefits of earnings estimate revisions and how that is harnessed through the Zacks quantitative rating system. But we have given our analysts the ability to override the Zacks Recommendation for the 1200 stocks that they follow. The reason for the analyst over-rides is that there are often factors such as valuation, industry conditions and management effectiveness that a trained investment professional can spot better than a quantitative model.

Zacks Rank

The Zacks Rank is our short-term rating system that is most effective over the one- to three-month holding horizon. The underlying driver for the quantitatively-determined Zacks Rank is the same as the Zacks Recommendation, and reflects trends in earnings estimate revisions.

Zacks Style Scores

The Zacks Style Score is as a complementary indicator to the Zacks rating system, giving investors a way to focus on the highest rated stocks that best fit their own stock picking preferences.

Academic research has proven that stocks with the best Value, Growth and Momentum characteristics outperform the market. The Zacks Style Scores rate stocks on each of these individual styles and assigns a rating of A, B, C, D and F. We also produce the VGM Score (V for Value, G for Growth and M for Momentum), which combines the weighted average of the individual Style Scores into one score. This is perfectly suited for those who want their stocks to have the best scores across the board.

Value Score	C
Growth Score	C
Momentum Score	D
VGM Score	D

As an investor, you want to buy stocks with the highest probability of success. That means buying stocks with a Zacks Recommendation of Outperform, which also has a Style Score of an A or a B.

Disclosures

This report contains independent commentary to be used for informational purposes only. The analysts contributing to this report do not hold any shares of this stock. The analysts contributing to this report do not serve on the board of the company that issued this stock.The EPS and revenue forecasts are the Zacks Consensus estimates, unless indicated otherwise on the reports first page. Additionally, the analysts contributing to this report certify that the views expressed herein accurately reflect the analysts personal views as to the subject securities and issuers. ZIR certifies that no part of the analysts compensation was, is, or will be, directly or indirectly, related to the specific recommendation or views expressed by the analyst in the report.

Additional information on the securities mentioned in this report is available upon request. This report is based on data obtained from sources we believe to be reliable, but is not guaranteed as to accuracy and does not purport to be complete. Any opinions expressed herein are subject to change.

ZIR is not an investment advisor and the report should not be construed as advice designed to meet the particular investment needs of any investor. Prior to making any investment decision, you are advised to consult with your broker, investment advisor, or other appropriate tax or financial professional to determine the suitability of any investment.This report and others like it are published regularly and not in response to episodic market activity or events affecting the securities industry.

This report is not to be construed as an offer or the solicitation of an offer to buy or sell the securities herein mentioned. ZIR or its officers, employees or customers may have a position long or short in the securities mentioned and buy or sell the securities from time to time.ZIR is not a broker-dealer.ZIR may enter into arms-length agreements with broker-dealers to provide this research to their clients.Zacks and its staff are not involved in investment banking activities for the stock issuer covered in this report.

ZIR uses the following rating system for the securities it covers. **Outperform-** ZIR expects that the subject company will outperform the broader U.S. equities markets over the next six to twelve months. **Neutral-** ZIR expects that the company will perform in line with the broader U.S. equities markets over the next six to twelve months. **Underperform-** ZIR expects the company will underperform the broader U.S. equities markets over the next six to twelve months.