

## Illumina, Inc.(ILMN)

**\$396.99** (As of 04/29/21)

Price Target (6-12 Months): **\$420.00**

Long Term: 6-12 Months

**Zacks Recommendation:**
**Neutral**

(Since: 03/15/21)

Prior Recommendation: Underperform

Short Term: 1-3 Months

**Zacks Rank:** (1-5)

**2-Buy**

Zacks Style Scores:

VGM:C

Value: D

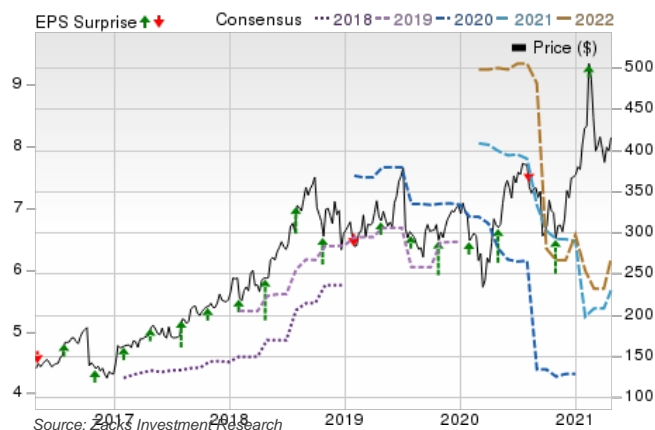
Growth: C

Momentum: A

## Summary

Illumina exited the first quarter of 2021 with better-than-expected results. Sequential improvement in segmental revenues across most geographies and strong microarrays revenues are encouraging. Robust adoption of NovaSeq 6000 v1.5 reagents is appreciative. Medical device registration receipt in Russia for NextSeq 550Dx and its associated reagent kits is praiseworthy. New TSO 500 partnership with Kartos Therapeutics augurs well for the stock. Solid long-term growth potential in the oncology space and worldwide expansion to drive growth also buoy optimism. A strong capital structure is an added plus. In the past six months, Illumina has outperformed its industry. Yet, pandemic-led lower sequencing revenues remain a concern. Contraction in both margins does not bode well either. Tough funding climate and stiff competition are other issues.

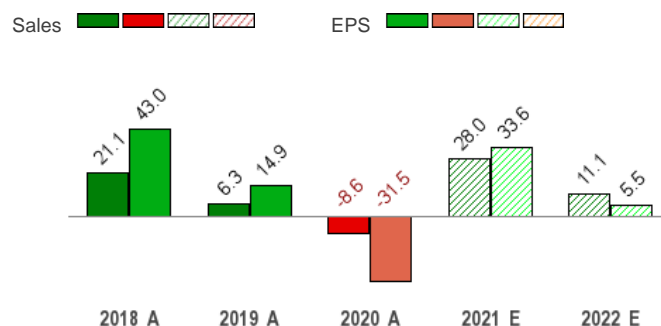
## Price, Consensus & Surprise



## Data Overview

52-Week High-Low	<b>\$555.77 - \$260.42</b>
20-Day Average Volume (Shares)	<b>881,008</b>
Market Cap	<b>\$58.4 B</b>
Year-To-Date Price Change	<b>8.1%</b>
Beta	<b>0.98</b>
Dividend / Dividend Yield	<b>\$0.00 / 0.0%</b>
Industry	<b>Medical - Biomedical and Genetics</b>
Zacks Industry Rank	<b>Bottom 20% (200 out of 250)</b>

## Sales and EPS Growth Rates (Y/Y %)



Last EPS Surprise	<b>39.0%</b>
Last Sales Surprise	<b>0.7%</b>
EPS F1 Estimate 4-Week Change	<b>12.3%</b>
Expected Report Date	<b>08/05/2021</b>
Earnings ESP	<b>-0.3%</b>
P/E TTM	<b>84.2</b>
P/E F1	<b>66.1</b>
PEG F1	<b>9.4</b>
P/S TTM	<b>16.8</b>

## Sales Estimates (millions of \$)

	Q1	Q2	Q3	Q4	Annual*
2022	1,098 E	1,102 E	1,167 E	1,262 E	4,608 E
2021	1,093 A	1,006 E	1,008 E	1,042 E	4,146 E
2020	859 A	633 A	794 A	953 A	3,239 A

## EPS Estimates

	Q1	Q2	Q3	Q4	Annual*
2022	\$1.45 E	\$1.44 E	\$1.61 E	\$1.77 E	\$6.34 E
2021	\$1.89 A	\$1.33 E	\$1.35 E	\$1.46 E	\$6.01 E
2020	\$1.64 A	\$0.62 A	\$1.02 A	\$1.22 A	\$4.50 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 04/29/2021. The report's text and the analyst-provided price target are as of 04/30/2021.

## Overview

San Diego, CA.-based Illumina Inc. is a life sciences company, which provides tools and integrated systems for analysis of genetic variation and function. Using its proprietary technologies, the company provides innovative sequencing- and array-based solutions for genotyping, copy number variation analysis, methylation studies, and gene expression profiling of DNA and RNA.

Its customers include leading genomic research centers, academic institutions, government laboratories, hospitals and reference laboratories as well as pharmaceutical, biotechnology, agrigenomics, commercial molecular diagnostic and consumer genomics companies.

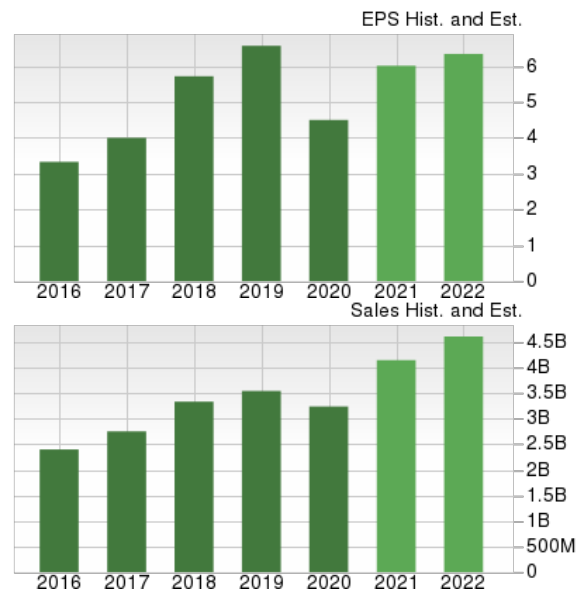
Illumina generates revenue from two segments – Product and Service.

**Product revenues** (84.4% of total revenues in 2020; down 6.6% from 2019) are primarily attributed to the partnerships and collaborations to develop distributable clinical in-vitro diagnostics (IVDs) for Illumina sequencers. Product revenues consist of sales proceeds from the Consumables and Instruments segment used in genetic analysis. This includes reagents, flow cells, and BeadChips) based on the company's proprietary technologies.

**Service revenues** (15.6%, down 17.9%) include genotyping and sequencing services as well as instrument maintenance contracts.

### Next-Generation Sequencing (NGS)

Illumina's portfolio of sequencing platforms represents a family of systems that are designed to meet the workflow, output, and accuracy demands of a full range of sequencing applications. The company's MiSeq sequencing system is a low-cost desktop sequencing system that provides individual researchers with rapid turnaround time, high accuracy and streamlined workflow. NextSeq 500, launched in January 2014, provides flexibility from whole genome sequencing to targeted panels in a desktop platform. The HiSeq 2500 sequencing system allows customers to sequence an entire human genome in approximately a day.



## Reasons To Buy:

- ▲ **Share Price performance:** In the past six months, Illumina has outperformed its industry. The stock has gained 36.6% compared with the industry's rise of 8.1%. Illumina exited the first quarter of 2021 with better-than-expected results. Gradually improving business conditions buoy optimism on the stock. Sequential improvement in segmental revenues across most geographies looks impressive as well. Strong microarrays revenues are also encouraging.

Additionally, robust adoption of NovaSeq 6000 v1.5 reagents to enhance deeper genomic discoveries is appreciative. Receipt of the medical device registration in Russia for NextSeq 550Dx and its associated reagent kits are also praiseworthy. The announcement of TSO 500 partnership with Kartos Therapeutics to advance comprehensive genomic profiling (CGP) for blood cancers augurs well for the stock. Solid long-term growth potential in the oncology space and worldwide expansion to drive growth also buoy optimism. A strong capital structure is an added plus.

Illumina's market opportunities continue to expand owing to accelerated demand from clinical and translational customers. The company's recent strategic collaborations are expected to expand its product portfolio.

- ▲ **Reproductive and Genetic Health Market Prospect High:** Illumina is currently keeping well with its goals to strengthen foothold in the multi-billion gene sequencing world-wide market with some highly competitive products in its existing portfolio and pipeline. This market is developing rapidly on a global scale which has allowed the company to witness a persistent growth in the number of non-invasive prenatal test (NIPT) samples.

In the first quarter, Illumina derived benefits from the cascading effect of the ACOG guidance on increasing coverage of NIPT for all pregnancies. This led the company's reproductive health business to register the third consecutive quarter of both year-over-year and sequential growth. Illumina, in partnership with Harvard Pilgrim Health Care, published favorable economic study results in March. This study demonstrated the cost-effectiveness of offering NIPT to pregnant women.

Internationally, the adoption of the CE-IVD-marked NIPT kit has been robust, reflecting increasing NIPT coverage.

Earlier the company noted that, with multiple large payors expanding coverage for all pregnancies, the company expects NIPT coverage in the United States to exceed three million pregnancies by the end of 2021.

- ▲ **Solid Long-Term Growth Potential in Oncology Space:** Lately, to catalyze clinical markets Illumina has adopted a strategy to deliver market-leading technologies and tailored solutions that will enable customers to personalize patient care through genomics. In its oncology business, yet another area of focus in Illumina's market expansion – this strategy has led the company to develop pharma partnerships and bring to market custom panel tests.

In the first quarter, Illumina's oncology testing exceeded the company's overall clinical growth rate, driven by the customers benefiting from expanded access to reimbursement for NGS-based testing, particularly in CGP, for therapy selection and some of the first reimbursement for sequencing-based monitoring tests. Further, the company's TruSight Oncology 500 (TSO 500), its RUO (For Research Use Only) CGP assay, continued its momentum in the reported quarter and added over 20 new customers.

Illumina's partnership with Kartos Therapeutics to develop a TP53 companion diagnostic (CDx) and expand the TruSight oncology offering into blood cancers also buoys optimism.

With an increasing number of targeted oncology therapies, the company earlier expects CGP to be a \$1 billion plus market by 2026. Management is also upbeat about Germany starting to cover tumor CGP and whole exome and whole genome for rare and undiagnosed genetic disease without restrictions.

Other recent notable achievements of Illumina in the oncology space include its partnership with Roche to boost the comprehensive pan-cancer assay TSO 500 and the National Health Service's commencement of a phased rollout for WGS for selected rare diseases and cancer patients as part of their routine care.

- ▲ **Greater Market Adoption Amid Pandemic:** Illumina's production scale got a major boost due to the pandemic. The company launched NextSeq 1000 and 2000 during the fourth quarter, which boosted its performance. Illumina received China's National Medical Products Administration's approval for NextSeq 550Dx in December 2020, which is expected to drive demand in local hospitals in applications like oncology and infectious disease testing. Management is optimistic about this approval as it is likely to drive NextSeq Dx placements and further increase its clinical presence in 2021.

Illumina registered continued strong market adoption of its NextSeq 1000 and 2000 platforms, and NextSeq 550 system. New NextSeq 550 placements were driven by continued adoption by the company's clinical customers, with NextSeq Dx registering its highest shipment quarter till date. In China, the NextSeq Dx instrument (which received NMPA approval in the last-reported quarter) continues to witness strong customer adoption in the hospital setting.

Further, the company continues to enjoy strong customer demand for its NovaSeq units, similar to the last-reported quarter. The sequencing consumable revenue growth of 25.7% year over year was driven by strong demand for NovaSeq v1.5 reagents and growth in clinical markets. In the reported quarter, Illumina witnessed its highest first-quarter placements of NovaSeq, primarily driven by the August 2020 launch of NovaSeq 6000 v1.5 reagents. The latest product led to higher new customer growth as well as additional HiSeq conversions.

- ▲ **Worldwide Expansion to Drive Growth:** Apart from North America, Illumina markets and distributes its products directly to customers in Europe, Latin America, and the Asia-Pacific region (APAC) either through its direct selling force or through distributors that specialize in life science products.

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In the quarter under review, EMEA revenues improved year over year (38%), primarily on the back of strong sequencing demand for clinical testing applications. Revenues from Greater China (which includes China, Taiwan and Hong Kong) surged 32% sequentially and 51% year over year, driven by continued strength in sequencing revenues on the back of clinical expansion in the region and growing demand in hospitals (which included the NextSeq 550 Dx launch). Revenues from APJ (Asia Pacific and Japan) grew 29% both sequentially and year over year, led by growth in sequencing consumables revenues in clinical applications and end-of-year purchases.

▲ **Partnerships Strengthen Business:** We are optimistic about Illumina's expansion strategy through the enhancement of its portfolio of sequencing products through new purchases and the development of strategic partnerships with therapeutics and diagnostic services providers.

The company, in April, entered into a partnership with Kartos Therapeutics to co-develop a TP53 CDx based on the content of Illumina's CGP assay, TSO 500.

Illumina, along with its strategic partner R-Pharm, received medical device registration in Russia for Illumina NextSeq 550Dx platform and associated reagent kits in March. This enabled Illumina to expand the clinical use of NGS for more patients across Russia. In January, the company announced its entry into a partnership with renowned population genomics company, Helix, to enhance national surveillance infrastructure in the United States to track the emergence and prevalence of novel strains of SARS-CoV-2 UK Variant (B.1.1.7).

The company, again in January, announced a collaboration with renowned investment firm Sequoia Capital China to catalyze the start-up ecosystem in China with the launch of the Sequoia Capital China Intelligent Healthcare Genomics Incubator, powered by Illumina. The same month, Illumina announced new and expanded oncology partnerships with Bristol Myers Squibb, Kura Oncology, Myriad Genetics and Merck to advance CGP. These series of oncology partnerships are aimed at expanding the reach of Illumina's CGP family of products, TruSight Oncology.

▲ **Strong Capital Structure:** Illumina exited the first quarter of 2021 with cash and cash equivalents, and short-term investments of \$4.63 billion compared with \$3.47 billion at the end of 2020.

The company did not repurchase any common stock in the quarter.

Net cash provided by operating activities at the end of the first quarter of 2021 was \$282 million compared with \$281 million a year ago.

Capital expenses incurred by the company at the end of the first quarter of 2021 were \$42 million compared with \$40 million a year ago. Accordingly, free cash flow reported by the company at the end of the first quarter of 2021 was \$240 million, down from the year-ago free cash flow of \$241 million.

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## Reasons To Sell:

- ▼ **Expensive Valuation:** Illumina's P/S (F12M) ratio is expensive in comparison to the broader industry. The company is currently trading at a forward P/S (F12M) ratio of 14.1 for the six months, whereas the current P/S (F12M) for the industry it belongs to is 2.3.
- ▼ **Tough Funding Environment to Restrict Growth:** The timing and amount of Illumina's revenues from customers that rely on government and academic research funding may vary significantly due to factors that can be difficult to forecast. This may lead to significant uncertainty concerning government and academic research funding worldwide. While funding for life science research can be volatile during periods of economic uncertainty, government funding of research and development is subject to the political process.

Budgetary pressures may result in further reduced allocations to government agencies that fund research and development activities, such as the U.S. National Institute of Health (NIH). Past proposals to reduce budget deficits have included reduced NIH and other research and development allocations. Any shift from the funding of life sciences research and development or delays surrounding the approval of government budget proposals may cause Illumina's customers to delay or forego purchases of its products.
- ▼ **Tough Competition:** Illumina faces significant competition in the sequencing, SNP genotyping, gene expression and molecular diagnostics markets with several large players already enjoying significant market share, intellectual property portfolios and regulatory expertise. Such companies include the likes of Agilent Technologies, Pacific Biosciences of California, BGI, QIAGEN N.V., Roche Holding A.G. and Thermo Fisher Scientific, among others. With substantially greater financial, technical, research and other resources, and larger, more established marketing, sales, distribution and service organization, these companies offer substantial challenges for Illumina. To compete effectively, the company must upgrade its organization and infrastructure appropriately and develop products with superior throughput, cost, and accuracy.

Government budget cuts, including NIH funding issues, and competition headwinds persist as major downsides.

## Last Earnings Report

### Illumina Q1 Earnings Top Estimates, Margins Decline

Illumina's first-quarter 2021 (ending Apr 4, 2021) adjusted earnings per share of \$1.89 surpassed the Zacks Consensus Estimate by 38.9%. Moreover, the bottom line improved 15.2% from the year-ago quarter (ending Mar 29, 2021).

The adjustments exclude acquisition-related expenses, primarily the Continuation Payments paid to GRAIL, and certain income tax benefits.

Including one-time items, the company's GAAP earnings per share was \$1.00, down by 14.5% year over year.

### Revenues

In the quarter under review, Illumina's revenues were \$1.09 billion, up 27.2% year over year. The top line also exceeded the Zacks Consensus Estimate of \$1.08 billion.

The first-quarter revenues were also up 15% from the sequential quarter's level.

### Segment Details

Sequencing Consumable revenues totaled \$695 million in the reported quarter, up 25.7% year over year. Sequencing Instrument revenues were \$176 million, reflecting a surge of 122.8% from the year-ago figure. However, Sequencing revenues (a subsegment of the Service & Other segment) were \$108 million, down 15.6% from the year-ago quarter.

In the first quarter, Illumina witnessed its highest first-quarter placements of NovaSeq, primarily driven by the August 2020 launch of NovaSeq 6000 v1.5 reagents. The latest product led to higher new customer growth as well as additional HiSeq conversions. Also, continued robust adoptions of NextSeq 1000 and 2000, and NextSeq 550 boosted the first-quarter top line.

Notably, the quarter's figure exceeds the company's preliminary estimate of \$1,085 million announced earlier this month.

### Margins

Adjusted gross margin (excluding amortization of acquired intangible assets) was 70.4% in the reported quarter, highlighting a contraction of 243 basis points (bps) year over year.

Research and development expenses increased 26.3% year over year to \$197 million, whereas selling, general & administrative expenses rose 36.5% to \$374 million. These pushed up operating costs by 32.8% to \$571 million.

Adjusted operating income in the quarter was \$199 million, up 1.5% from the year-ago income. Adjusted operating margin came in at 18.2%, reflecting a contraction of 461 bps year over year.

### Financial Update

Illumina exited the first quarter of 2021 with cash and cash equivalents plus short-term investments of \$4.63 billion compared with \$3.47 billion at the end of 2020.

The company did not repurchase any common stock in the quarter.

Net cash provided by operating activities at the end of the first quarter of 2021 was \$282 million compared with \$281 million a year ago.

Capital expenses incurred by the company at the end of the first quarter of 2021 were \$42 million compared with \$40 million a year ago. Accordingly, free cash flow reported by the company at the end of the first quarter of 2021 was \$240 million, down from the year-ago free cash flow of \$241 million.

### 2021 Guidance

Illumina raised its revenue outlook for 2021 to the range of \$4.05 billion-\$4.15 billion, indicating a surge of 25-28% from 2020 (up from its earlier provided range of \$3.79 billion-\$3.89 billion indicating 17-20% improvement from the year-ago period). The Zacks Consensus Estimate for the same is currently pegged at \$3.97 billion.

Adjusted earnings per share for 2021 is projected in the range of \$5.80-\$6.05, up from the earlier provided guidance of \$5.10-\$5.35. The Zacks Consensus Estimate for the same is currently pegged at \$5.67.

Quarter Ending	03/2021
Report Date	Apr 27, 2021
Sales Surprise	0.74%
EPS Surprise	38.97%
Quarterly EPS	1.89
Annual EPS (TTM)	4.75

## Recent News

### Illumina, Kartos Therapeutics Enter New Oncology Partnership: Apr 22, 2021

Illumina entered a new partnership with Kartos Therapeutics, Inc. to co-develop a TP53 CDx based on the content of Illumina's CGP assay, TSO 500.

### Illumina Reports Study Results Demonstrating Cost-Effectiveness of NIPT: Mar 11, 2021

Illumina, along with researchers at the University of Colorado and Harvard Pilgrim Health Care, reported study results evaluating the impact of a risk-sharing agreement that opened insurance coverage of non-invasive prenatal testing (NIPT) for pregnant women under the age of 35.

### Illumina's IVD-Ready Solutions Gets Clearance in Russia: Mar 5, 2021

Illumina NextSeq 550Dx platform and associated reagent kits have received medical device registration in Russia, as have reagents for the MiSeq Dx which was approved previously as a medical device.

### Illumina, Sequoia Capital Enter Partnership: Jan 31, 2021

Illumina entered into a partnership with Sequoia Capital China, a leading investment firm, to catalyze the startup ecosystem in China with the launch of the Sequoia Capital China Intelligent Healthcare Genomics Incubator, powered by Illumina.

## Valuation

Illumina shares are up 8.1% in the year-to-date period and up 30.8% in the trailing 12-month periods. Stocks in the Zacks sub-industry are down 1.9% while the Zacks Medical sector are up 0.2% in the year-to-date period. Over the past year, the Zacks sub-industry is up 2.9% while sector is up 8.7%.

The S&P 500 index is up 13.3% in the year-to-date period and up 51.9% in the past year.

The stock is currently trading at 68.5X Forward 12-months earnings, which compares to 47.7X for the Zacks sub-industry, 22.9X for the Zacks sector and 22.7X for the S&P 500 index.

Over the past five years, the stock has traded as high as 94.5X and as low as 29.5X, with a 5-year median 47.1X. Our Neutral recommendation indicates that the stock will perform in-line with the market. Our \$420 price target reflects 71.9X forward 12-months earnings.

The table below shows summary valuation data for ILMN.

Valuation Multiples - ILMN					
		Stock	Sub-Industry	Sector	S&P 500
P/E F12M	Current	68.52	47.68	22.93	22.74
	5-Year High	94.45	58.48	22.93	23.83
	5-Year Low	29.47	21.09	15.85	15.30
	5-Year Median	47.11	41.88	19.27	18.01
P/S F12M	Current	14.05	2.33	2.72	4.81
	5-Year High	18.27	3.01	3.16	4.81
	5-Year Low	6.73	1.83	2.27	3.21
	5-Year Median	11.29	2.33	2.79	3.71
P/B TTM	Current	12.43	3.14	3.97	7.17
	5-Year High	16.10	5.02	5.07	7.17
	5-Year Low	6.67	2.00	3.02	3.83
	5-Year Median	11.00	3.73	4.34	4.99

As of 04/29/2021

Source: Zacks Investment Research



## Industry Analysis Zacks Industry Rank: Bottom 20% (200 out of 250)



## Top Peers

Company (Ticker)	Rec	Rank
Alexion Pharmaceuticals, Inc. (ALXN)	Neutral	4
SWEDISH ORP BIO (BIOVF)	Neutral	4
BioMarin Pharmaceutical Inc. (BMRN)	Neutral	3
Incyte Corporation (INCY)	Neutral	3
QIAGEN N.V. (QGEN)	Neutral	3
SINO PHARMACEUT (SBMFF)	Neutral	3
Thermo Fisher Scientific Inc. (TMO)	Neutral	3
Vertex Pharmaceuticals Incorporated (VRTX)	Neutral	4

The positions listed should not be deemed a recommendation to buy, hold or sell.

Industry Comparison Industry: Medical - Biomedical And Genetics				Industry Peers		
	ILMN	X Industry	S&P 500	SBMFF	TMO	VRTX
Zacks Recommendation (Long Term)	Neutral	-	-	Neutral	Neutral	Neutral
Zacks Rank (Short Term)	2	-	-	3	3	4
VGM Score	C	-	-	C	A	B
Market Cap	58.39 B	401.60 M	30.59 B	20.20 B	182.51 B	54.83 B
# of Analysts	6	3	12	2	10	12
Dividend Yield	0.00%	0.00%	1.28%	0.00%	0.22%	0.00%
Value Score	D	-	-	C	B	B
Cash/Price	0.06	0.22	0.05	NA	0.05	0.12
EV/EBITDA	49.99	-6.48	17.18	NA	18.93	14.83
PEG F1	9.44	1.47	2.33	NA	1.09	1.63
P/B	11.86	4.19	4.21	3.45	5.33	6.34
P/CF	65.53	22.13	17.57	22.67	18.16	22.13
P/E F1	66.05	26.84	22.12	35.67	21.32	18.69
P/S TTM	16.81	24.29	3.45	NA	5.08	8.55
Earnings Yield	1.50%	-11.41%	4.42%	2.80%	4.69%	5.35%
Debt/Equity	0.34	0.00	0.66	NA	0.55	0.06
Cash Flow (\$/share)	6.10	-0.99	6.78	0.05	25.57	9.57
Growth Score	C	-	-	B	A	C
Historical EPS Growth (3-5 Years)	16.64%	18.91%	9.70%	NA	17.40%	162.16%
Projected EPS Growth (F1/F0)	33.63%	6.54%	17.90%	50.00%	11.42%	9.83%
Current Cash Flow Growth	-26.36%	15.99%	0.72%	-50.46%	39.75%	103.13%
Historical Cash Flow Growth (3-5 Years)	6.15%	6.24%	7.37%	NA	16.81%	50.36%
Current Ratio	4.45	6.16	1.38	NA	2.13	4.33
Debt/Capital	25.36%	0.00%	41.51%	NA	35.64%	5.84%
Net Margin	18.14%	-179.15%	11.34%	NA	22.08%	43.06%
Return on Equity	14.81%	-57.29%	15.46%	NA	29.62%	30.41%
Sales/Assets	0.45	0.17	0.50	NA	0.55	0.58
Projected Sales Growth (F1/F0)	28.06%	11.72%	8.16%	16.00%	9.11%	10.88%
Momentum Score	A	-	-	F	A	A
Daily Price Change	-1.38%	-1.02%	0.95%	0.00%	-4.41%	-0.76%
1-Week Price Change	4.00%	1.34%	0.47%	1.00%	-0.98%	-0.68%
4-Week Price Change	3.87%	-4.15%	4.28%	4.39%	1.77%	-0.55%
12-Week Price Change	-6.70%	-14.80%	13.31%	9.18%	-5.02%	-0.87%
52-Week Price Change	25.36%	26.72%	51.32%	7.72%	38.76%	-15.66%
20-Day Average Volume (Shares)	881,008	265,258	1,724,478	1,538	1,528,384	1,509,930
EPS F1 Estimate 1-Week Change	6.47%	0.00%	0.00%	0.00%	0.18%	0.00%
EPS F1 Estimate 4-Week Change	12.30%	0.00%	0.41%	0.00%	0.25%	-0.23%
EPS F1 Estimate 12-Week Change	15.17%	-2.27%	2.24%	0.00%	8.28%	-0.67%
EPS Q1 Estimate Monthly Change	7.24%	0.00%	0.33%	NA	1.11%	0.30%

Source: Zacks Investment Research



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## 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 maintain a 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	<b>D</b>
Growth Score	<b>C</b>
Momentum Score	<b>A</b>
VGM Score	<b>C</b>

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.

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## Disclosures

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## Glossary of Terms and Definitions

**52-Week High-Low:** The range of the highest and lowest prices at which a stock has traded during the past year. This range is determined based on the stock's daily closing price which may differ from the intra-day high or low. Many investors use it as a technical indicator to determine a stock's current value and future price movement. The idea here is that if price breaks out from the 52-week range, in either direction, the momentum may continue in the same direction.

**20-Day Average Volume (Shares):** The average number of shares of a company traded in a day over the last 20 days. It is a direct indication of a security's overall liquidity. The higher the average daily trading volume, the easier it is to enter or exit the stock at a desired price with more buyers and sellers being available.

**Daily Price Change:** This is the percentage difference between a trading day's closing price and the prior trading day's closing price. This item is updated at 9 p.m. EST each day.

**1-Week Price Change:** This is the percentage change in a stock's closing price over the last 5 trading days. This change reflects the collective buying and selling sentiment over the 1-week period.

A strong weekly price increase for the stock, especially when accompanied by increased volume, is an indication of it gaining momentum.

**4-Week Price Change:** This is the percentage change in a stock's closing price over the last 20 trading days or past 4 weeks. This is a medium-term price change metric and an indication of the stock gaining momentum.

**12-Week Price Change:** This is the percentage change of a stock's closing price over the last 60 trading days or past 12 weeks. Similar to 4-week price change, this is a medium-term price change metric. It shows whether a stock has been enjoying strong investor demand, or if it has been in consolidation, or distress over this period.

**52-Week Price Change:** This is the percentage change in a stock's closing price over the last 260 trading days or past 52 weeks. This long-term price change metric is a good reference point for investors. Some investors seek stocks with the best percentage price change over the last 52 weeks, expecting the momentum to continue.

**Market Cap:** The number of outstanding common shares of a company times its latest price per share. This figure represents a company's size, which indicates various characteristics, including price stability and risk, in which investors could be interested.

**Year-To-Date Price Change:** Change in a stock's daily closing price in the period of time beginning the first day of the current calendar year through to the previous trading day.

**# of Analysts:** Number of EPS estimates used in calculating the current-quarter consensus. These estimates come from the brokerage analysts tracking this stock. However, the number of such analysts tracking this stock may not match the number of estimates, as all brokerage analysts may not come up with an estimate or provide it to us.

**Beta:** A measure of risk commonly used to compare the volatility of a stock to the overall market. The S&P 500 Index is the base for calculating beta and carries a value of 1. A stock with beta below 1 is less risky than the market as a whole. And a stock with beta above 1 is riskier.

**Dividend:** The portion of earnings a company is expected to distribute to its common shareholders in the next 12 months for each share they own. Dividends are usually paid quarterly. Dividend payments reflect positively on a company and help maintain investors' trust. Investors typically find dividend-paying stocks appealing because the dividend adds to any market price appreciation to result in higher return on investment (ROI). Moreover, a steady or increasing dividend payment provides investors a cushion in a down market.

**Dividend Yield:** The ratio of a company's annual dividend to its share price. The annual dividend used in the ratio is calculated based on the most recent dividend paid by the company. Dividend yield is an estimate of the dividend-only return from a stock in the next 12 months. Since dividend itself doesn't change frequently, dividend yield usually changes with a stock's price movement. As a result, often an unusually high dividend yield is a result of weak stock price.

**S&P 500 Index:** The Standard & Poor's 500 (S&P 500) Index is an unmanaged group of securities considered to be representative of the stock market in general. It is a market-capitalization-weighted index of stocks of the 500 largest U.S. companies. Each stock's weight in the index is proportionate to its market value.

**Industry:** One of the 250+ groups that Zacks classifies all stocks into based on the nature of business. These groups are termed as expanded (aka "X") industries and map to their respective (economic) sectors; Zacks has 16 sectors.

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**Zacks Industry Rank:** The Zacks Industry Rank is determined by calculating the average Zacks Rank for all stocks in the industry and then assigning an ordinal rank to it. For example, an industry with an average Zacks Rank of 1.6 is better than an industry with an average Zacks Rank of 2.3. So, the industry with the better average Zacks Rank would get a better Zacks Industry Rank. If an industry has the best average Zacks Rank, it would be considered the top industry (1 out of 250+), which would place it at the top 1% of Zacks-ranked industries. Studies have shown that roughly half of a stock's price movement can be attributed to the industry group it belongs to. In fact, the top 50% of Zacks-ranked industries outperforms the bottom 50% by a factor of more than 2 to 1.

**Last EPS Surprise:** The percentage deviation of a company's last reported earnings per share from the Zacks Consensus Estimate. Companies with a positive earnings surprise are more likely to surprise again in the future (or miss again if they recently missed).

**Last Sales Surprise:** The percentage deviation of a company's last reported sales from the Zacks Consensus Estimate.

**Expected Report Date:** This is an estimated date of a company's next earnings release. The information originated or gathered by Zacks Investment Research from its information providers or publicly available sources is the basis of this estimate.

**Earnings ESP:** The Zacks Earnings ESP compares the Most Accurate Estimate to the Zacks Consensus Estimate for the yet-to-be reported quarter. The Most Accurate Estimate is the most recent version of the Zacks Consensus EPS Estimate. The idea here is that analysts revising their estimates closer to an earnings release have the latest information, which could potentially be more accurate than what they and others contributing to the consensus had predicted earlier. Thus, a positive or negative Earnings ESP reading theoretically indicates the likely deviation of the actual earnings from the consensus estimate. However, the model's predictive power is significant for positive ESP readings only. A positive Earnings ESP is a strong predictor of an earnings beat, particularly when combined with a Zacks Rank #1 (Strong Buy), #2 (Buy) or #3 (Hold). Our research shows that stocks with this combination produce a positive surprise nearly 70% of the time.

**Periods:**

**TTM:** Trailing 12 months. Using TTM figures is an effective way of analyzing the most-recent financial data in an annualized format that helps neutralize the effects of seasonality and other quarter-to-quarter variation.

**F1:** Current fiscal year. This period is used to analyze the estimates for the ongoing full fiscal year.

**F2:** Next fiscal year. This period is used to analyze the estimates for the next full fiscal year.

**F12M:** Forward 12 months. Using F12M figures is an effective way of analyzing the near-term (the following four unreported quarters) estimates in an annualized manner. Instead of typically representing estimates for the full fiscal year, which may not represent the nitty-gritty of each quarter, F12M figures suggest an all-inclusive annualized estimate for the following four quarters. The annualization helps neutralize the potential effects of seasonality and other quarter-to-quarter variations.

**P/E Ratio:** The price-to-earnings ratio measures a company's current market price per share relative to its earnings per share (EPS). Usually, the trailing-12-month (TTM) EPS, current-fiscal-year (F1) EPS estimate, or forward-12-month (F12M) EPS estimate is used as the denominator. In essence, this ratio shows what the market is willing to pay today for each dollar of EPS. In other words, this ratio gives a sense of what the relative value of the company is at the already reported level of earnings or at a future level of earnings.

It is one of the most widely-used multiples for determining the value of a company and helps comparing its valuation with that of a competitor, the industry group or a benchmark.

**PEG Ratio:** The price/earnings to growth ratio is a stock's P/E ratio using current fiscal year (F1) EPS estimate divided by its expected EPS growth rate over the coming 3 to 5 years. This ratio essentially determines a stock's value by factoring in the company's expected earnings growth and is thus believed to provide a more complete picture than just the P/E ratio, particularly for faster-growing companies.

**P/S Ratio:** The price-to-sales ratio is calculated as a company's current price per share divided by trailing 12 months (TTM) sales or revenues per share. This ratio shows what the market is willing to pay today for each dollar of TTM sales per share. The P/S ratio is at times the only valuation metric when the company has yet to become profitable.

**Cash/Price Ratio:** The cash-to-price ratio or Cash Yield is calculated as cash and marketable securities per share divided by the company's current share price. Like the earnings yield, which shows the anticipated yield (or return) on a stock from earnings for each dollar invested, the cash yield does the same, with cash being the source of return instead of earnings. For example, a cash/price ratio of 0.08 suggests a return of 8% or 8 cents for every \$1 investment.

**EV/EBITDA Ratio:** The EV/EBITDA ratio, also known as Enterprise Multiple, is calculated as a company's enterprise value (market capitalization + value of total long-term debt + book value of preferred shares - cash and marketable securities) divided by EBITDA (earnings before interest, taxes, depreciation and amortization). Usually, trailing-12-month (TTM) or forward-12-month (F12M) EBITDA is used as the denominator.

**EV/Sales Ratio:** The enterprise value-to-sales ratio is calculated as a company's enterprise value (market capitalization + value of total long-term debt + book value of preferred shares - cash and marketable securities) divided by annual sales. It is an expansion of the P/S valuation, which uses market value instead of enterprise value. The EV/Sales ratio is perceived as more accurate than P/S, in part, because the market capitalization does not take a company's debt into account when valuing it.

**EV/CF Ratio:** The enterprise value-to-cash flow ratio is calculated as a company's enterprise value (market capitalization + value of total long-term debt + book value of preferred shares - cash and marketable securities) divided by the trailing-12-month (TTM) operating cash flow. It's a measure of how long it would take to buy the entire business if you were able to use all the company's operating cash flow.

The EV/CF ratio is perceived as more accurate than the P/CF ratio, in part, because the market price does not take a company's debt into account when valuing it.

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**EV/FCF Ratio:** The enterprise value-to-free cash flow metric compares a company's enterprise value to its trailing-12-month (TTM) free cash flow (FCF). This metric is very similar to the EV/CF ratio, but is considered a more exact measure owing to the fact that it uses free cash flow, which subtracts capital expenditures (CAPEX) from a company's total operating cash flow, thereby reflecting the actual cash flow available for funding growth activities and payments to shareholders.

**P/EBITDA Ratio:** The P/EBITDA ratio is calculated as a company's per share market value divided by EBITDA (earnings before interest, taxes, depreciation, and amortization). This metric is very similar to the EV/EBITDA ratio, but is considered a little less exact measure as it uses market price, which does not take a company's debt into account. However, since EBITDA is often considered a proxy for cash income, the metric is used as a measure of what the market is willing to pay today for each dollar of the company's cash profitability in the trailing 12 months (TTM) or forward 12 months (F12M).

**P/B Ratio:** The price-to-book ratio is calculated as a company's current price per share divided by its book value (total assets – liabilities – preferred stocks) per share. In short, the book value is how much a company is worth. In other words, it reflects the total value of a company's assets that its common shareholders would receive if it were to be liquidated. So, the P/B ratio indicates whether you're paying higher or lower than what would remain if the company went bankrupt immediately. Investors typically use this metric to determine how a company's stock price stacks up to its intrinsic value.

**P/TB Ratio:** The price-to-tangible-book value ratio is calculated as a the per share market value of a company divided by the value of its tangible assets (total assets – liabilities – preferred stocks – intangible assets) per share. Tangible book value is the same thing as book value except it excludes the value of intangible assets to get a step closer to the baseline value of the company.

**P/CF Ratio:** The price-to-cash flow ratio measures a company's per share market price relative to its trailing-12-month (TTM) operating cash flow per share. This metric is used to determine whether a company is undervalued or overvalued relative to another stock, industry or sector. And like the P/E ratio, a lower number is typically considered better from the value perspective.

One of the reasons why P/CF ratio is often preferred over P/E ratio is the fact that operating cash flow adds back non-cash expenses such as depreciation and amortization to net income. This feature helps valuing stocks that have positive cash flow but are not profitable because of large noncash charges.

**P/FCF Ratio:** The price-to-free cash flow ratio is an extension of P/CF ratio, which uses trailing-12-month (TTM) free cash flow per share instead of operating cash flow per share. This metric is considered a more exact measure than P/CF ratio, as free cash flow subtracts capital expenditures (CAPEX) from a company's total operating cash flow, thereby reflecting the actual cash flow available for funding activities that generate additional revenues.

**Earnings Yield:** The earnings yield is calculated as current fiscal year (F1) EPS estimate divided by the company's current share price. The ratio, which is the inverse of the P/E ratio, measures the anticipated yield (or return) from earnings for each dollar invested in a stock today.

For example, earnings yield for a stock, which is trading at \$35 and expected to earn \$3 per share in the current fiscal year (F1), would be 0.0857 ( $3/35 = 0.0857$ ) or 8.57%. In other words, for \$1 invested in the stock today, the yield from earnings is anticipated to be 8.57 cents.

Investors most commonly compare the earnings yield of a stock to that of a broad market index (such as the S&P 500) and prevailing interest rates, such as the current 10-year Treasury yield. Since bonds and stocks compete for investors' dollars, stock investors typically demand a higher yield for the extra risk they assume compared to investors of U.S. Treasury-backed securities that offer virtually risk-free returns. This additional return is referred to as the risk premium.

**Debt/Equity Ratio:** The debt-to-equity ratio is calculated as a company's total liabilities divided by its shareholder equity. This metric is used to gauge a company's financial leverage. In other words, it is a measure of the degree to which a company is financing its operations through debt versus its own funds. The higher the ratio, the higher the risk for shareholders.

However, this ratio is difficult to compare across industry groups where ideal amounts of debt vary. Some businesses are more capital intensive than others and typically require higher debt to finance their operations. So, a company's debt-to-equity ratio should be compared with other companies in the same industry.

**Cash Flow (\$/share):** Cash flow per share is calculated as operating cash flow (after-tax earnings + depreciation + other non-cash charges) divided by common shares outstanding. It is used by many investors as a measure of a company's financial strength. Since cash flow per share takes into consideration a company's ability to generate cash by adding back non-cash expenses, it is regarded by some as a more accurate measure of a company's financial situation than earnings per share, which could be artificially deflated.

**Current Ratio:** The current ratio or liquidity ratio is a company's current assets divided by its current liabilities. It measures a company's ability to pay short-term obligations. A current ratio that is in line with the industry average or slightly higher is generally considered acceptable. A current ratio that is lower than the industry average would indicate a higher risk of distress or default. A higher number is usually better. However, a very high current ratio compared to the industry average could be an indication of inefficient use of assets by management.

**Debt/Capital Ratio:** Debt-to-capital ratio is a company's total debt (interest-bearing debt + both short- and long-term liabilities) divided its total capital (interest-bearing debt + shareholders' equity). It is a measure of a company's financial leverage. All else being equal, the higher the debt-to-capital ratio, the riskier the stock.

However, this ratio can vary widely from industry to industry, the ideal amount of required debt being different. Some businesses are more capital intensive than others and typically require higher debt to finance their operations. So, a company's debt-to-capital ratio should be compared with the same for its industry.

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**Net Margin:** Net margin is calculated as net income divided by sales. It shows how much of each dollar in sales generated by a company translates into profit. For example, if a company's net margin is 15%, its net income is 15 cents for every \$1 of sales it makes.

A change in margin can reflect either a change in business conditions, or a company's cost controls, or both. If a company's expenses are growing faster than sales, its net margin will decline. However, different net margin rates are considered good for different industries, so it's better to compare net margin rates of companies in the same industry group.

**Return on Equity:** Return on equity (ROE) is calculated as trailing-12-month net income divided by trailing-12-month average shareholder equity (including reinvested earnings). This metric is considered a measure of how effectively management is using a company's assets to generate profits. For example, if a company's ROE is 10%, it creates 10 cents profits for every \$1 shareholder equity, which is basically the company's assets minus debt. A company's ROE deemed good or bad depends on what's normal for its peers or industry group.

**Sales/Assets Ratio:** The sales-to-assets ratio or asset utilization ratio or asset turnover ratio is calculated as a company's annual sales divided by average assets (average of assets at the beginning of the year and at the year's end). This metric helps investors understand how effectively a company is using its assets to generate sales. For example, a sales-to-assets ratio of 2.5 indicates that the company generated \$2.50 in sales for every \$1 of assets on its books.

The higher the sales-to-assets ratio, the better the company is performing. However, similar to many other ratios, the asset turnover ratio tends to be higher for companies in certain industries/sectors than in others. So, a company's sales-to-assets ratio should be compared with the same for its industry/sector.

**Historical EPS Growth (3-5 Years):** This is the average annual (trailing-12-month) EPS growth rate over the last 3-5 years. This metric helps investors see how a company's EPS has grown from a long-term perspective.

Note: There are many factors that can influence short-term numbers — a recession will reduce this number, while a recovery will inflate it. The longterm perspective helps smooth out short-term events.

**Projected EPS Growth (F1/F0):** This is the estimated EPS growth rate for the current financial year. It is calculated as the consensus estimate for the current fiscal year (F1) divided by the reported EPS for the last completed fiscal year (F0).

**Current Cash Flow Growth:** It measures the latest year-over-year change in operating cash flow. Cash flow growth tells an investor how quickly a company is generating inflows of cash from operations. A positive change in the cash flow is desired and shows that more 'cash' is coming in than going out.

**Historical Cash Flow Growth (3-5 Years):** This is the annualized change in cash flow over the last 3-5 years. The change in a longer period helps put the current reading into proper perspective. By looking at the rate, rather than the actual dollar value, the comparison across the industry and peers becomes easier.

**Projected Sales Growth (F1/F0):** This metric looks at the estimated sales growth for the current year. It is calculated as sales estimate for the current fiscal year (F1) divided by the reported sales for the last completed fiscal year (F0).

Like EPS growth, a higher rate is better for sales growth. A look at a company's projected sales growth instantly tells you what the outlook is for their products and services. However, different sales growth rates are considered good for different industries, so it's better to compare sales growth rates of companies in the same industry group.

**EPS F1 Estimate 1-Week Change:** The percentage change in the Zacks Consensus EPS estimate for the current fiscal year over the past week. The change in a company's consensus EPS estimate (or earnings estimate revision) has proven to be strongly correlated with the near-term price movement of its shares. It is an integral part of the Zacks Rank.

If a stock's consensus EPS estimate is \$1.10 now versus \$1.00 a week ago, that will be reflected as a 10% upward revision. If, on the other hand, it went from \$1.00 to 90 cents, that would be a 10% downward revision.

**EPS F1 Estimate 4-Week Change:** The percentage change in the Zacks Consensus EPS estimate for the current fiscal year over the past four weeks.

A stock's earnings estimate revision in a 1-week period is important. But it's more meaningful to look at the longer-term revision. And, of course, the 4-week change helps put the 1-week change into proper perspective.

**EPS F1 Estimate 12-Week Change:** The percentage change in the Zacks Consensus EPS estimate for the current fiscal year over the past 12 weeks.

This metric essentially shows how the consensus EPS estimate has changed over a period longer than 1 week or 4 weeks.

**EPS Q1 Estimate Monthly Change:** The percentage change in the Zacks Consensus EPS estimate for the current fiscal quarter over the past four weeks.

While the revision in consensus EPS estimate for the current fiscal year is strongly correlated with the near-term price movement of its shares, the estimate revision for the current fiscal quarter is an important metric as well, especially over the short term, and particularly as a stock approaches its earnings date. If a stock's Q1 EPS estimate decreases ahead of its earnings release, it's usually a negative sign, whereas an increase is a positive sign.