

## Cboe Global(CBOE)

**\$80.10** (As of 10/21/20)

Price Target (6-12 Months): **\$84.00**

Long Term: 6-12 Months

**Zacks Recommendation:**

**Neutral**

(Since: 06/12/19)

Prior Recommendation: Underperform

Short Term: 1-3 Months

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

**3-Hold**

Zacks Style Scores:

VGM:C

Value: D

Growth: A

Momentum: F

## Summary

Organic growth remained a key strength at Cboe Global. The company eyes strategic acquisitions to gain a competitive edge by diversifying and adding capabilities to its portfolio. The buyout of Bats Global diversified product portfolio, boost margins and generate expense synergies while the MATCHNow buyout will help it venture into Canada. Cboe Global explores new markets like the Middle East, Scandinavia and Asia. Trading volume growth should continue to drive transaction fee. Strong liquidity has been aiding capital deployment. Shares of Cboe Global have underperformed the industry year to date. However, escalating expenses put pressure on margin expansion. It expects expenses to rise in the second half of 2020 as it intends to ramp up growth initiatives. CBOE Global faces competition that tends to reduce market share and leverage of the business.

## Data Overview

|                                |                                 |
|--------------------------------|---------------------------------|
| 52-Week High-Low               | <b>\$127.93 - \$72.01</b>       |
| 20-Day Average Volume (Shares) | <b>875,052</b>                  |
| Market Cap                     | <b>\$8.7 B</b>                  |
| Year-To-Date Price Change      | <b>-33.3%</b>                   |
| Beta                           | <b>0.54</b>                     |
| Dividend / Dividend Yield      | <b>\$1.68 / 2.1%</b>            |
| Industry                       | <b>Securities and Exchanges</b> |
| Zacks Industry Rank            | <b>Top 48% (121 out of 254)</b> |

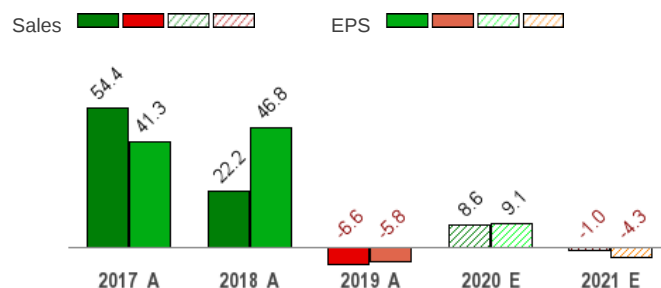
|                               |                   |
|-------------------------------|-------------------|
| Last EPS Surprise             | <b>4.8%</b>       |
| Last Sales Surprise           | <b>-0.2%</b>      |
| EPS F1 Estimate 4-Week Change | <b>-0.9%</b>      |
| Expected Report Date          | <b>10/30/2020</b> |
| Earnings ESP                  | <b>0.0%</b>       |

|         |             |
|---------|-------------|
| P/E TTM | <b>14.7</b> |
| P/E F1  | <b>15.5</b> |
| PEG F1  | <b>4.3</b>  |
| P/S TTM | <b>2.8</b>  |

## Price, Consensus & Surprise



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



## Sales Estimates (millions of \$)

|      | Q1    | Q2    | Q3    | Q4    | Annual* |
|------|-------|-------|-------|-------|---------|
| 2021 | 303 E | 309 E | 306 E | 298 E | 1,223 E |
| 2020 | 358 A | 297 A | 285 E | 294 E | 1,235 E |
| 2019 | 281 A | 283 A | 294 A | 280 A | 1,137 A |

## EPS Estimates

|      | Q1       | Q2       | Q3       | Q4       | Annual*  |
|------|----------|----------|----------|----------|----------|
| 2021 | \$1.21 E | \$1.26 E | \$1.26 E | \$1.22 E | \$4.94 E |
| 2020 | \$1.65 A | \$1.31 A | \$1.07 E | \$1.13 E | \$5.16 E |
| 2019 | \$1.11 A | \$1.13 A | \$1.29 A | \$1.21 A | \$4.73 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 10/21/2020. The reports text is as of 10/22/2020.

## Overview

Based in Chicago, IL, and founded in 1973, Cboe Global Markets, Inc. (effective Oct 17, 2017, CBOE Holdings, Inc. came to be known as Cboe Global Markets, Inc.) is one of the largest stock exchange operators by volume in the United States and a leading market globally for ETP trading.

Cboe offers trading across a diverse range of products in multiple asset classes and geographies, including options, futures, U.S. and European equities, exchange-traded products (ETPs), global foreign exchange (FX) and multi-asset volatility products based on the VIX Index. Cboe's trading venues include the largest options exchange in the United States and the largest stock exchange by value traded in Europe.

CBOE reports the results of its operations in five business segments —

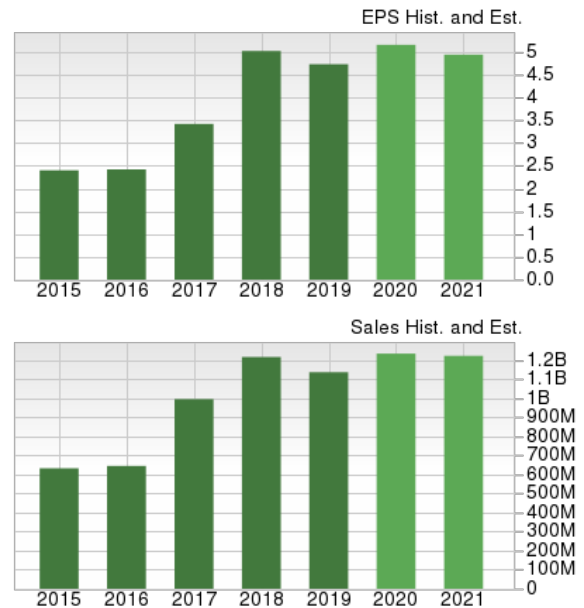
**Options (34.9% of 2019 revenues)** includes options exchange business that lists for trading options on market indexes, including the VIX Index and SPX, non-exclusive multilisted options and options on other ETPs. These options trade on Cboe Options, C2, BZX and EDGX.

**U.S. Equities (48.6%)** includes listed cash equities and ETP transaction services that occur on BZX, BYX, EDGX and EDGA. It also includes ETP listings, market data revenues generated from U.S. tape plans and from the sale of proprietary market data, routing services, connectivity fees and advertising activity from ETF.com.

**Futures (5.4%)** includes the business of futures exchange, CFE, which lists futures on the VIX Index, corporate bond indexes and bitcoin and other futures products. It also includes market data revenues generated from the sale of associated proprietary market data.

**European Equities (4.4%)** includes pan European listed cash equities transaction services, ETPs, exchange-traded commodities, and international depository receipts that occur on the RIE, operated by Cboe Europe Equities. It also includes listed cash equities and ETPs routed transaction services that occurred through Cboe Chi-X Europe, as well as the listings business where ETPs can be listed on Cboe Europe Equities.

**Global FX (2.1%)** includes institutional FX services on the Cboe FX platform. The Global FX segment also includes non-deliverable forward FX transactions executed on Cboe SEF.



Source: Zacks Investment Research

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## Reasons To Buy:

- ▲ Shares of Cboe Global Markets have lost 33.5% year to date underperforming the industry's increase of 1.6%. Nevertheless, the solid fundamentals like diversified product portfolio and strong liquidity position should help the stock bounce back.
- ▲ Cboe Global Markets boasts a compelling inorganic growth story given its prudent acquisitions. While the acquisition of Bats Global expands and diversifies CBOE Global Markets' product portfolio with the addition of U.S. and European cash equities, Global ETPs and Global FX widens global reach with solid pan-European equities and global FX positions. Cboe Global acquired Trade Alert to provide real-time data, market information and alerts to customers and EuroCCP to enhance European equities offering and extend business into trading and clearing European derivatives. The buyout of MATCHNow will help venture into Canada. On the other hand acquisition of Hanweck and FT Options and Silexx helped boost its service portfolio. Strategic acquisitions have helped the company to gain a competitive edge by diversifying as well as adding capabilities to its portfolio.

Cboe's growth strategy revolves around expanding product line across asset classes, broadening geographic reach, diversifying business mix with recurring revenues and leveraging technology.

Cboe Global Markets anticipates to achieve \$50 million in annualized expense synergies from the Bats Global buyout within three years of the acquisition. In 2020, the company estimates to achieve \$85 million of run rate synergies. The company expects to achieve the synergies through its shift to a single proprietary trading platform and by optimizing the expense structure of the combined entity.

- ▲ Organic growth remained a key strength at Cboe Global Markets, as reflected in its revenue growth story. Revenues witnessed CAGR of 32% over the last five years (2014-2019). Increasing transaction fees on the back of trading volume growth aided the improvement. In the first half of 2020, the top line increased 46.5% year over year due to higher transaction fees, access and capacity fees, market data fees, regulatory fees plus other revenues. Transaction fees increased 49.5% on the back of higher market volumes in Options, U.S. Equities and Futures. Given its strong market position and a global reach with strength in its proprietary products, primarily SPX options, VIX options and VIX futures, the growth momentum should continue.

The company is also exploring new markets like the Middle East, Scandinavia and Asia, while pursuing jurisdictional approval in more established markets, including Switzerland and Israel. It has plans to launch CBOE Closing Cross, a new post-close trading service serving across 18 European markets in October 2019 and intends to bring similar product in the U.S. Equities market too.

- ▲ Cboe Global Markets enjoys strong liquidity position despite cash outlays to enhance operating leverage. Strong liquidity not only mitigates balance sheet risks but also paves the way for an accelerated capital deployment. It hiked dividend for ten consecutive years. In June 2020, the company increased its share repurchase authorization by \$250 million and thus had \$330 million remaining under its existing share repurchase authorization as on Jun 30, 2020. These endeavors testify the company's confidence in its liquidity position and the ongoing focus on its efficient capital deployment strategy.
- ▲ The company's debt has been decreasing since 2017. Total debt has increased 0.1% from 2019-end level to \$868.6 million. At the end of the second quarter of 2020, debt to capital was 23.4%, up from 21.4% at the end of 2019. Nonetheless, times interest earned, a measure to identify the company ability to service debt, was 21.5% in the second quarter, up from the 2019 level of 15%. It compared favorably with the industry's measure of 12.4%, implying that its earnings are sufficient to cover interest obligations. Also, the company has \$250 million available under revolver in case of short-term funding requirement.

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## Reasons To Sell:

- ▼ Elevated expenses remain a major concern for CBOE Holdings. Given the several ongoing investments in systems hardware and software (including CBOE Holdings' systems migration to Bats technology), expenses are likely to trend higher. However, in the first half of 2020, total operating expenses decreased 8.5%, due to a decline in depreciation and amortization, travel and promotional expenses and acquisition-related costs. For 2020, adjusted operating expenses are projected in the range of \$436 million to \$444 million, up from \$419-\$427 million expected earlier, reflecting EuroCCP and expenses related to European derivatives growth initiative. The company estimates expenses are expected to accelerate the second half of 2020 as it intends to ramp up growth initiatives and complete Chicago headquarters build-out. The company now estimates core expense growth to be down 1% to 2% compared with flat to up 1% expected earlier.
- ▼ The company reaffirmed capital expenditure guidance for 2020 in the range of \$65 million to \$70 million, which includes expenditures associated with the company's Chicago headquarters relocation occurring later this year and its trading floor relocation planned for 2021. This will account for around one-third of the incremental spend. Additionally, the company forecasts depreciation and amortization in the band of \$34-\$38 million in 2020, which excludes amortization of intangibles of approximately \$120 million.
- ▼ CBOE Holdings has been facing intense competition due to increased market consolidation that tends to reduce market share and leverage of the business. This includes both product and price competition, which are continuously increasing due to the creation of new execution and listing venues in the United States. As a result, CBOE Holdings' market share has witnessed decline over the last few years.

Industry volatility, elevated expenses weighing on margin expansion and sluggish credit quality amid intense competition due to increased market consolidation and challenging regulations are headwinds.

## Last Earnings Report

### Cboe Global's Q2 Earnings Beat Estimates, Rise Y/Y

Cboe Global's second-quarter 2020 adjusted earnings of \$1.31 per share beat the Zacks Consensus Estimate by 4.8%. Moreover, the bottom line increased 15.9% year over year on increased trading activity, expanded operating margin, and decline in expenses.

#### Operational Details

Total revenues came in at \$296.9 million, missing the Zacks Consensus Estimate by 0.03%.

However, the top line increased 5% year over year, reflecting higher market data fees, primarily due to revenues from the acquisitions of Hanweck and FT Options in the first quarter of 2020 and record quarterly trading volumes in U.S. equities and multi-listed options.

Options revenues increased 7% year over year to \$150.6 million driven by higher net transaction fees and market data revenues, offset by a decrease in royalty fees.

Average daily volume for Options surged 36% year over year while revenue per contract or RPC slipped 24% in the second quarter.

Revenues of U.S. Equities increased 22% year over year to \$90.6 million, driven by higher revenues from net transaction fees, as well as higher revenues from non-transaction fees.

Futures revenues of \$20.9 million were down 36% year over year due to a decline in net transaction fees.

European Equities revenues decreased 6% year over year to \$21.1 million, due to decrease in net transaction fees, offset by higher access and capacity fees.

Global FX revenues increased 5% to \$13.7 million driven by higher access and capacity fees and net transaction fees.

Total adjusted operating expenses decreased 7% year over year to \$95.8 million attributable to lower professional fees and outside services and travel and promotional expenses.

Adjusted operating income improved 12% year over year to \$201.1 million. The improvement was driven by higher net revenues and lower operating expenses.

Adjusted operating margin in the quarter under review expanded 410 basis points (bps) to 67.7% owing to increased operating leverage from higher net revenues.

Adjusted EBITDA margin of 71.1% expanded 270 bps.

#### Financial Update

As of Jun 30, 2020, CBOE Global had cash and cash equivalents of \$210.1 million, down 8.4% from the figure at 2019 end. Total assets were \$5.4 billion in the second quarter, up 4.9% from the level at 2019 end.

At the end of the second quarter, long-term debt of the company stands at \$868.6 million, up 0.1% year over year.

Total shareholders' equity was \$3.3 billion at the end of the reported quarter, down 2.1% from the value on Dec 31, 2019.

#### Share Repurchase and Dividend Update

The company paid out cash dividends worth \$39.5 million or 36 cents per share in the second quarter.

As of Jun 30, 2020, the company had \$329.9 million of availability remaining under its existing share repurchase authorizations.

#### 2020 Guidance

Adjusted operating expenses are now expected to be in the range of \$436 to \$444 million, up \$17 million from the previous guidance of \$419 to \$427 million, primarily reflecting the addition of EuroCCP and expenses related to the launch of pan-European derivatives trading and clearing.

Capital expenditures are still expected in the \$65-\$70 million band. Depreciation and amortization expense are estimated between \$34 million and \$38 million.

The effective tax rate on adjusted earnings is expected between 26.5% and 28.5%. However, it is now expected to be at the higher end of the range in the third quarter of 2020.

| Quarter Ending   | 06/2020      |
|------------------|--------------|
| Report Date      | Jul 31, 2020 |
| Sales Surprise   | -0.16%       |
| EPS Surprise     | 4.80%        |
| Quarterly EPS    | 1.31         |
| Annual EPS (TTM) | 5.46         |

## Recent News

### Cboe Global to Buy BIDS Trading, Boost U.S. Equity Segment - Oct 16, 2020

Cboe Global Markets is set to acquire BIDS Trading, a registered broker dealer and the operator of the BIDS Alternative Trading System (ATS) for an undisclosed amount. The transaction is expected to close in early 2021, pending regulatory review and other customary closing conditions. Transaction terms were not made public. Cboe Global intends to fund the acquisition through debt. The acquisition is expected to provide Cboe Global with a meaningful presence in the substantial off-exchange segment of the U.S. equities market. It will complement and expand the spectrum of equity trading products, services and solutions available from Cboe Global's businesses to enhance customers' trading experience.

### Cboe Global Posts Strong September Volumes, Guides Q3 RPC - Oct 5, 2020

Cboe Global Market recorded total average daily volume (ADV) of 10.4 million contracts in September, up 26.4% year over year driven by solid performance in Options, partly offset by lower Futures volume. Though U.S. Equities and Global Forex witnessed increase, European Equities declined. Total contracts for the month were nearly 218.2 million, up 32.6% year over year. Of this, Options improved 34% to 214.1 million while Futures decreased 13% to 4.1 million. Options' ADV was 10.2 million whereas Futures' ADV was 0.2 million.

Total volumes of U.S. Equities came in at 32.2 billion shares, up 33.5% year over year. European Equities reflected a 11.5% deterioration year over year to €129.3 billion whereas Global FX increased 10.1% to \$702.1 billion. Total volumes of Canadian Equities traded were 828.8 million in September.

## Valuation

CBOE Global shares are down 33.2% in the year-to-date period and 29.8% over the trailing 12-month period. Stocks in the Zacks sub-industry and the Zacks Finance sector are up 1.6% but down 15.8% in the year-to-date period, respectively. Over the past year, the Zacks sub-industry and sector are up 2.7% but down 11.6%, respectively.

The S&P 500 index is up 6.9% in the year-to-date period and 14.7% in the past year.

The stock is currently trading at 16.08x forward 12-month earnings, which compares to 24.81x for the Zacks sub-industry, 15.8x for the Zacks sector and 22.17x for the S&P 500 index.

Over the past five years, the stock has traded as high as 36.5x and as low as 14.91x, with a 5-year median of 24x. Our Neutral recommendation indicates that the stock will perform in-line with the market. Our \$84 price target reflects 16.86x forward 12-month earnings.

The table below shows summary valuation data for CBOE

| Valuation Multiples - CBOE |               |       |              |        |         |
|----------------------------|---------------|-------|--------------|--------|---------|
|                            |               | Stock | Sub-Industry | Sector | S&P 500 |
| P/E F12M                   | Current       | 16.08 | 24.81        | 15.8   | 22.17   |
|                            | 5-Year High   | 36.5  | 27.47        | 16.74  | 23.47   |
|                            | 5-Year Low    | 14.91 | 18.49        | 11.6   | 15.27   |
|                            | 5-Year Median | 24    | 22.25        | 14.41  | 17.68   |
| P/S F12M                   | Current       | 7.11  | 11.25        | 6.14   | 4.11    |
|                            | 5-Year High   | 14.16 | 12.94        | 6.66   | 4.31    |
|                            | 5-Year Low    | 6.03  | 7.27         | 4.96   | 3.18    |
|                            | 5-Year Median | 9.12  | 10.54        | 6.06   | 3.67    |
| P/B TTM                    | Current       | 2.65  | 3.22         | 2.54   | 5.97    |
|                            | 5-Year High   | 23.07 | 3.54         | 2.91   | 6.2     |
|                            | 5-Year Low    | 2.5   | 1.82         | 1.72   | 3.75    |
|                            | 5-Year Median | 3.9   | 2.74         | 2.54   | 4.9     |

As of 10/21/2020

Source: Zacks Investment Research

## Industry Analysis Zacks Industry Rank: Top 48% (121 out of 254)



## Top Peers

| Company (Ticker)                     | Rec        | Rank |
|--------------------------------------|------------|------|
| Envestnet, Inc. (ENV)                | Outperform | 2    |
| CME Group Inc. (CME)                 | Neutral    | 4    |
| Intercontinental Exchange Inc. (ICE) | Neutral    | 3    |
| Moodys Corporation (MCO)             | Neutral    | 2    |
| MarketAxess Holdings Inc. (MKT)      | Neutral    | 3    |
| MSCI Inc (MSCI)                      | Neutral    | 3    |
| Nasdaq, Inc. (NDAQ)                  | Neutral    | 3    |
| OTC Markets Group Inc. (OTCM)        | Neutral    | 3    |

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

| Industry Comparison Industry: Securities And Exchanges |         |            |           | Industry Peers |         |         |
|--------------------------------------------------------|---------|------------|-----------|----------------|---------|---------|
|                                                        | CBOE    | X Industry | S&P 500   | ICE            | MKT     | NDAQ    |
| Zacks Recommendation (Long Term)                       | Neutral | -          | -         | Neutral        | Neutral | Neutral |
| Zacks Rank (Short Term)                                | 3       | -          | -         | 3              | 3       | 3       |
| VGM Score                                              | C       | -          | -         | D              | C       | C       |
| Market Cap                                             | 8.71 B  | 21.74 B    | 23.50 B   | 54.00 B        | 21.19 B | 21.74 B |
| # of Analysts                                          | 7       | 6          | 14        | 6              | 5       | 7       |
| Dividend Yield                                         | 2.10%   | 1.48%      | 1.61%     | 1.21%          | 0.43%   | 1.48%   |
| Value Score                                            | D       | -          | -         | D              | F       | D       |
| Cash/Price                                             | 0.04    | 0.04       | 0.07      | 0.03           | 0.03    | 0.04    |
| EV/EBITDA                                              | 12.65   | 17.85      | 13.40     | 17.45          | 71.21   | 18.28   |
| PEG F1                                                 | 4.28    | 2.60       | 2.75      | 2.44           | NA      | 2.44    |
| P/B                                                    | 2.65    | 3.62       | 3.45      | 3.18           | 24.83   | 3.62    |
| P/CF                                                   | 12.36   | 20.20      | 13.17     | 19.39          | 88.75   | 21.27   |
| P/E F1                                                 | 15.51   | 22.55      | 22.05     | 22.55          | 73.68   | 22.26   |
| P/S TTM                                                | 2.84    | 7.29       | 2.68      | 7.29           | 34.45   | 4.16    |
| Earnings Yield                                         | 6.44%   | 4.43%      | 4.40%     | 4.43%          | 1.36%   | 4.49%   |
| Debt/Equity                                            | 0.26    | 0.20       | 0.70      | 0.45           | 0.00    | 0.59    |
| Cash Flow (\$/share)                                   | 6.48    | 6.22       | 6.93      | 5.13           | 6.29    | 6.22    |
| Growth Score                                           | A       | -          | -         | D              | A       | B       |
| Historical EPS Growth (3-5 Years)                      | 23.03%  | 13.26%     | 10.39%    | 13.26%         | 20.79%  | 11.28%  |
| Projected EPS Growth (F1/F0)                           | 9.00%   | 13.64%     | -2.30%    | 13.70%         | 40.26%  | 18.91%  |
| Current Cash Flow Growth                               | -6.75%  | 5.26%      | 5.49%     | 7.25%          | 21.24%  | 0.39%   |
| Historical Cash Flow Growth (3-5 Years)                | 25.08%  | 18.37%     | 8.50%     | 15.62%         | 20.85%  | 10.02%  |
| Current Ratio                                          | 1.57    | 1.09       | 1.37      | 1.01           | 7.42    | 1.16    |
| Debt/Capital                                           | 20.91%  | 16.13%     | 42.41%    | 31.45%         | 0.00%   | 37.26%  |
| Net Margin                                             | 15.07%  | 29.01%     | 10.35%    | 29.01%         | 42.74%  | 17.41%  |
| Return on Equity                                       | 18.23%  | 18.23%     | 14.78%    | 14.18%         | 33.75%  | 17.15%  |
| Sales/Assets                                           | 0.59    | 0.36       | 0.51      | 0.07           | 0.64    | 0.36    |
| Projected Sales Growth (F1/F0)                         | 8.49%   | 8.81%      | -0.53%    | 12.00%         | 31.63%  | 9.64%   |
| Momentum Score                                         | F       | -          | -         | A              | A       | A       |
| Daily Price Change                                     | -1.99%  | 0.90%      | -0.36%    | -0.48%         | 1.47%   | 2.62%   |
| 1-Week Price Change                                    | -1.71%  | -0.84%     | 0.02%     | -0.09%         | 3.07%   | 3.05%   |
| 4-Week Price Change                                    | -10.07% | 2.55%      | 6.76%     | 2.55%          | 24.17%  | 10.56%  |
| 12-Week Price Change                                   | -10.14% | 1.04%      | 4.10%     | 5.48%          | 7.86%   | 1.04%   |
| 52-Week Price Change                                   | -29.76% | 6.06%      | 1.99%     | 7.04%          | 63.10%  | 30.66%  |
| 20-Day Average Volume (Shares)                         | 875,052 | 868,557    | 1,882,561 | 2,462,378      | 194,409 | 868,557 |
| EPS F1 Estimate 1-Week Change                          | -0.06%  | 0.03%      | 0.00%     | 0.00%          | 0.03%   | 0.14%   |
| EPS F1 Estimate 4-Week Change                          | -0.92%  | 0.19%      | 0.14%     | 0.19%          | 1.26%   | 1.49%   |
| EPS F1 Estimate 12-Week Change                         | -2.14%  | 0.34%      | 3.22%     | -0.19%         | 0.34%   | 1.51%   |
| EPS Q1 Estimate Monthly Change                         | -2.87%  | 0.59%      | 0.00%     | 3.07%          | 2.33%   | 1.17%   |

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.

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### 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    | D |
| Growth Score   | A |
| Momentum Score | F |
| VGM Score      | C |

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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Investing involves risk; principal loss is possible. There is no guarantee that companies that can issue dividends will declare, continue to pay or increase dividends.

## 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 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.