

Universal Display (OLED)

\$215.73 (As of 06/23/21)

Price Target (6-12 Months): **\$227.00**

Long Term: 6-12 Months

Zacks Recommendation:

Neutral

(Since: 11/03/20)

Prior Recommendation: Underperform

Short Term: 1-3 Months

Zacks Rank: (1-5)

2-Buy

Zacks Style Scores:

VGM:F

Value: F

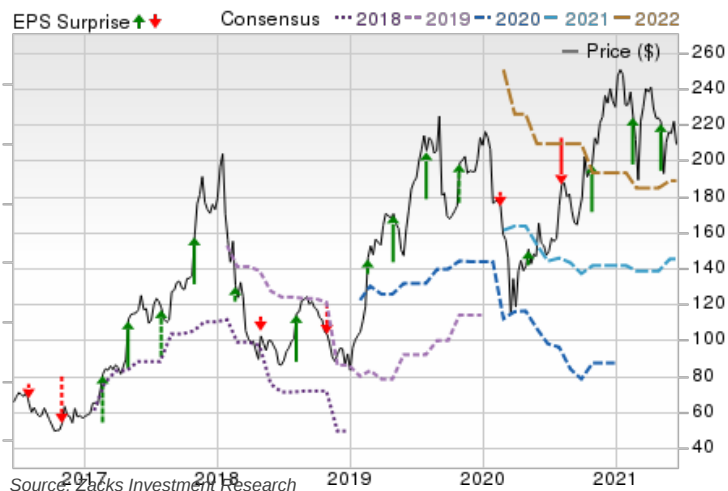
Growth: D

Momentum: F

Summary

Universal Display is benefiting from increasing demand for red and green emitter products. The company's strong patent portfolio helped the company to drive Royalty and license fees revenues. Synergies from acquisition of Adesis are bolstering top-line growth. The company's quarterly dividend payout ability amid testing times remains noteworthy. Recovery in OLED-based (Organic Light Emitting Diode) panel adoption across automotive market and rebound in smartphone domain are positives. However, chip shortage is a headwind for Universal Display. Also, increasing expenses are likely to weigh on the margins. Further, significant customer concentration from few customers like Samsung and LG along with susceptibility to forex headwinds remain persistent overhangs. Shares have underperformed the industry on a year-to-date basis.

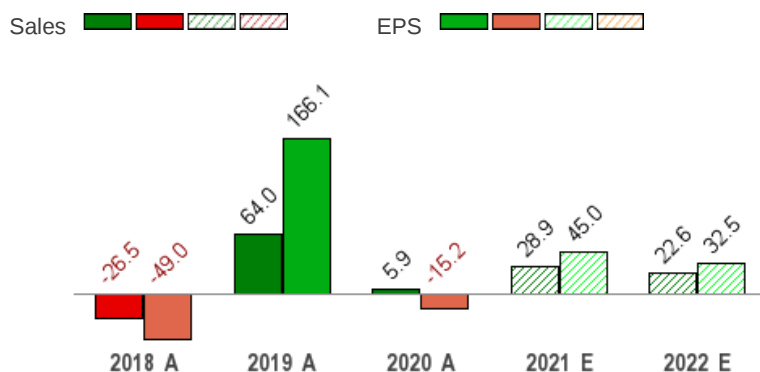
Price, Consensus & Surprise



Data Overview

52-Week High-Low	\$262.77 - \$143.51
20-Day Average Volume (Shares)	240,142
Market Cap	\$10.2 B
Year-To-Date Price Change	-6.1%
Beta	1.34
Dividend / Dividend Yield	\$0.80 / 0.4%
Industry	Electronics - Miscellaneous Components
Zacks Industry Rank	Bottom 49% (128 out of 252)

Sales and EPS Growth Rates (Y/Y %)



Sales Estimates (millions of \$)

	Q1	Q2	Q3	Q4	Annual*
2022	140 E	153 E	190 E	204 E	678 E
2021	134 A	122 E	149 E	150 E	553 E
2020	112 A	58 A	117 A	142 A	429 A

EPS Estimates

	Q1	Q2	Q3	Q4	Annual*
2022	\$0.97 E	\$1.10 E	\$1.56 E	\$1.72 E	\$5.38 E
2021	\$1.08 A	\$0.73 E	\$1.14 E	\$1.10 E	\$4.06 E
2020	\$0.80 A	\$0.02 A	\$0.85 A	\$1.13 A	\$2.80 A

*Quarterly figures may not add up to annual.

Last EPS Surprise	61.2%
Last Sales Surprise	17.1%
EPS F1 Estimate 4-Week Change	0.0%
Expected Report Date	08/05/2021
Earnings ESP	0.0%
P/E TTM	70.0
P/E F1	53.1
PEG F1	1.8
P/S TTM	22.6

The data in the charts and tables, including the Zacks Consensus EPS and sales estimates, is as of 06/23/2021. The report's text and the

analyst-provided price target are as of 06/24/2021.

Overview

Ewing, NJ-based Universal Display Corporation is a leading developer of technology and intellectual property (IP) for the Organic Light Emitting Diodes (OLED) market.

OLEDs are thin, lightweight and power-efficient solid-state devices that emit light. This can be manufactured on both flexible and rigid substrates, making them highly suitable for use in full-color displays and also as lighting products.

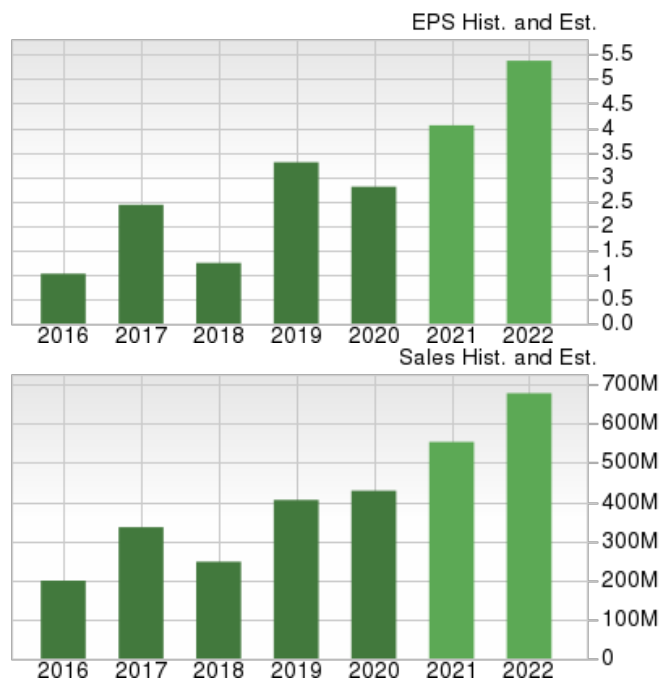
Universal Display reported revenues of \$428.9 million in 2020. The company reports operations under three heads, namely Material sales (53.6% of 2020 revenues), Royalty and license fees (43.1% of revenues) and Contract research services (3.3% of revenues).

Material sales include revenues from both phosphorescent emitter and host materials. Royalty and license fees include fee payments under patent license agreement with SDC, and licensed sales and royalties from customers.

Contract research services include revenues earned by Adesis, which performs organic and organometallic synthetics research, development and commercialization on a contractual basis for the company's customers. It also includes technology development and support revenues along with government contracts.

Notably, 97% revenues were generated from non-U.S. locations in 2020. Country wise, South Korea accounted for 61.3% of revenues followed by China contributing 33.1%.

Universal Display's primary competitors are Cambridge Display Technology, Novaled AG, iFire Technology, Luxell Technologies, Ostendo Technologies, eMagin Corporation, Seoul Semiconductor, and Illumitex Inc.



Reasons To Buy:

- ▲ Universal Display is a dominant provider of OLED technology. The technology is expected to eventually replace LED and liquid crystal displays (LCD) technologies due to energy efficiency, higher contrast ratio, better viewing angle, lower video response time and smaller form factor. These superior properties of OLED provide ample room for growth that brightens up Universal Display's prospects.
- ▲ We believe strong end-market demand presents significant growth opportunity for Universal Display over the long term. OLED is suitable for commercial usage in a number of industries, including smartphones, television, virtual reality devices and automotive markets. The increasing proliferation of smartphones, wearables and tablets are driving adoption of small-area OLEDs. Large-area OLED displays are increasingly used in televisions. Further, unlike LEDs, OLEDs can be viewed directly and doesn't need diffusers. It is also expected to be cost-effective when manufactured in high volumes, which makes it suitable for commercial application in the solid-state lighting market. Universal Display expects the installed base of OLED square meter capacity to increase by approximately 50% at the end of 2021 over installed base at the end of 2019, which will improve revenue opportunities for the company.
- ▲ Universal Display's dominance in OLED technology is primarily driven by its strong portfolio of 5,000 patents issued and pending worldwide, per the latest update provided on Feb 18, 2021. Notably, the company's UniversalPHOLED phosphorescent OLED technology produces OLEDs that are four times more efficient than fluorescent OLEDs and significantly more efficient than current LCDs. This provides Universal Display with a competitive advantage over other OLED makers. Additionally, collaborations with the likes of Princeton University, the University of Southern California, the University of Michigan and PPG Industries will continue to strengthen its patent portfolio in the long haul.
- ▲ The strong patent portfolio also helps Universal Display earn significant licensing revenues. Samsung, LG Display, BOE Technology, Visionox and Tianma are notable users of the company's licenses. Universal Display also has license agreements with Konica Minolta, Sumitomo, Lumiotec, Pioneer, Kaneka and OLEDWorks to manufacture OLED lighting products.
- ▲ Universal Display's solid debt-free balance sheet and liquidity position is noteworthy. As of Mar 31, 2021, Universal Display had cash and cash equivalents (including short-term investments) of \$727 million. The strong cash balance helps it pursue strategic acquisitions. Moreover, during the first-quarter 2021, cash flow from operations was \$29.5 million compared with \$5.7 million in first-quarter 2020. The increasing cash flows indicate that the company is making investments in the right direction. This, in turn, is helping the company to continue shareholder-friendly initiatives like dividend payments. Markedly, the company hiked quarterly cash dividend by 33.3% to 20 cents per share for the first quarter of 2021. The company's ability to generate solid free cash flow is expected to help it sustain current dividend payout (0.26) level, at least in the near term.

Dominance in the OLED market, solid patent portfolio, strong end-market demand, solid balance sheet and liquidity position favor growth prospects of the company.

Reasons To Sell:

- ▼ The coronavirus outbreak in China and South Korea is expected to hurt Universal Display's top-line growth. Notably, South Korea accounted for 61.3% of revenues followed by China contributing to 33.1% in 2020.
- ▼ OLED adoption is still in very early stages and is expected to take some time to gain significant traction. Additionally, long lead times for incremental capacity addition are a headwind. Moreover, change in accounting rules increase volatility in licensing revenues. These factors don't bode well for investors at least in the near term.
- ▼ Moreover, sluggishness in premium smartphone market doesn't bode well for the company. Further, Universal Display faces significant competition not only from other OLED makers but also from other emerging technologies like quantum dots or thermally activated delayed fluorescence (TADF). Also, LCD continues to dominate the display market. Increasing competition can hurt the company's market share as well as pricing power that will negatively impact profitability in the near term.
- ▼ The company has substantial operations outside the United States. Notably, 97% of revenues in 2020 were derived from sales to customers outside the United States. Hence, volatility in foreign exchange is a significant concern.
- ▼ Further, Universal Display faces significant customer concentration, as a huge chunk of revenues come from few customers like Samsung Display, BOE Technology and LG Display, each contributing more than 10% to revenues in 2020.

Long lead times, intensifying competition, significant customer concentration, and volatility in foreign exchange are key headwinds.

Last Earnings Report

Universal Display Q1 Earnings & Revenues Top Estimates

Universal Display's first-quarter 2021 earnings improved 35% year over year to \$1.08 per share and topped the Zacks Consensus Estimate by 61.19%.

The increase can be attributed to growth in revenue base. Revenues increased 19.3% year over year to \$134 million and beat the Zacks Consensus Estimate by 17.09%.

Segment Details

Material sales (59.6% of total revenues) climbed 19.9% from the year-ago quarter's figure to \$79.8 million. Green emitters sales (including yellow-green emitters) were \$60.5 million, up 15% year over year. Red emitter sales were \$19.1 million, up 37.4% year over year.

Royalty and license fees (37.9% of total revenues) surged 18.1% year over year to \$50.9 million driven by higher customer sales of royalty-bearing OLED licensed products.

Adesis revenues amounted to \$3.3 million during the reported quarter compared with \$2.6 million in the year-ago quarter.

Contract research services revenues (2.5% of total revenues) were \$3.3 million, up 26% year over year.

Operating Details

Gross margin in the quarter under review came in at 82.6%, which expanded 260 basis points (bps) from the year-ago quarter's figure. Material gross margin expanded 400 bps on a year-over-year basis to 74%.

Operating expenses of \$48.8 million climbed 4% year over year. As a percentage of revenues, operating expenses contracted 520 bps on a year-over-year basis to 35.2%.

The company reported operating income of \$63.6 million, up 42.8% on a year-over-year basis. Moreover, operating margin expanded 780 bps on a year-over-year basis to 74%. This can be attributed to gross margin expansion and lower operating expenses.

Balance Sheet & Cash Flow

As of Mar 31, 2021, Universal Display had cash and cash equivalents (including short-term investments) of \$727 million compared with of \$730 million as of Dec 31, 2020.

During the reported quarter, cash flow from operations was \$29.5 million compared with \$5.7 million in first-quarter 2020.

Guidance

Universal Display maintained 2021 outlook. The company continues to project 2021 revenues in the range of \$530 million to \$560 million.

Moreover, the company continues to expect 2021 material gross margins in the 65-70% range. Operating margins are 2021 are anticipated in the 40-45% range.

Research & development (R&D) expenses are projected to be up nearly 25% and Selling, general and administrative (SG&A) expenses are anticipated to be up nearly 15% for 2021. Overall, operating expenses (SG&A, R&D and patent costs) are expected to increase in the range of 20-25% on a year-over-year basis.

Markedly, Universal Display's products are widely used by OEMs in the consumer electronics markets like Apple, Samsung, Lenovo and LG. In 2020, the company also announced its collaboration with China Star Optoelectronics and set up OVJP Corporation to further commercialization of OLED TV manufacturing technology.

Quarter Ending	03/2021
Report Date	May 06, 2021
Sales Surprise	17.09%
EPS Surprise	61.19%
Quarterly EPS	1.08
Annual EPS (TTM)	3.08

Recent News

On May 6, Universal Display announced quarterly cash dividend of 20 cents per share, to be paid out on Jun 30, 2021 to all shareholders of record on Jun 15, 2021.

On Apr 23, Universal Display and Visionox Technology, Inc. signed a new OLED Technology License and Material Purchase agreement, thereby extending their existing long-term agreement for another five years.

On Apr 2, Universal Display and LG Display signed a new OLED Technology License and Material Purchase agreement, thereby extending their existing long-term agreement for another five years.

On Feb 26, Universal Display announced that UDC Ireland Limited in collaboration with PPG will set up a manufacturing facility in Shannon, Ireland. The manufacturing facility will be utilized to produce UniversalPHOLED materials.

Valuation

Universal Display's shares are down 6.1% in the year-to-date period but up 42.6% in the trailing 12-month period. Stocks in the Zacks sub-industry are down 3% but the same in the Zacks Computer & Technology sector are up 16.9% in the year-to-date period. In the past year, the Zacks sub-industry and sector are up 31.1% and 48%, respectively.

The S&P 500 index is up 13.9% in the year-to-date period, and 39.8% in the past year.

The stock is currently trading at 46X forward 12-month earnings compared with 20.33X for the Zacks sub-industry, 27.74X for the Zacks sector and 21.70X for the S&P 500 index.

In the past five years, the stock has traded as high as 80.8X and as low as 28.68X, with a five-year median of 50.75X. Our Neutral recommendation indicates that the stock will perform in line with the market. Our \$227 price target reflects 48.42X forward 12-month earnings.

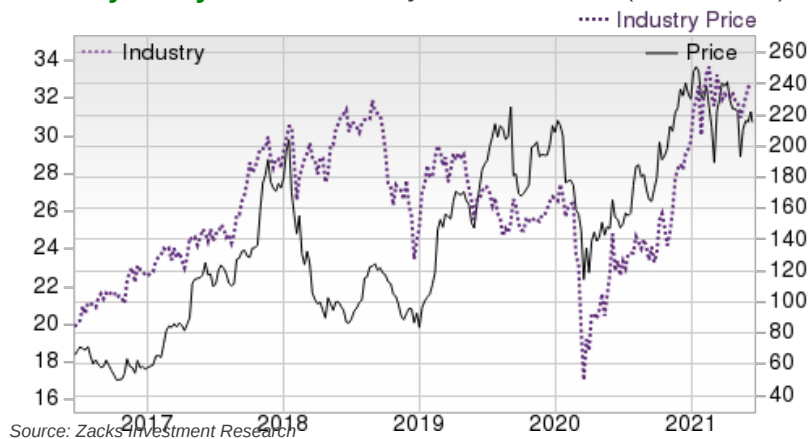
The table below shows summary valuation data for OLED

Valuation Multiples - OLED					
		Stock	Sub-Industry	Sector	S&P 500
P/E F12M	Current	46.00	20.33	27.74	21.70
	5-Year High	80.80	24.49	28.33	23.83
	5-Year Low	28.68	14.31	16.98	15.31
	5-Year Median	50.75	17.64	20.23	18.05
P/S F12M	Current	16.59	2.25	4.95	4.72
	5-Year High	26.69	2.38	4.95	4.74
	5-Year Low	9.87	1.04	2.80	3.21
	5-Year Median	16.56	1.6	3.53	3.72
EV/Sales TTM	Current	20.95	2.75	5.71	4.87
	5-Year High	29.27	3.12	5.79	4.88
	5-Year Low	10.35	1.33	3.09	2.65
	5-Year Median	19.56	2.06	4.00	3.64

As of 06/23/2021

Source: Zacks Investment Research

Industry Analysis Zacks Industry Rank: Bottom 49% (128 out of 252)



Top Peers

Company (Ticker)	Rec	Rank
CalAmp Corp. (CAMP)	Neutral	3
CTS Corporation (CTS)	Neutral	2
Fabrinet (FN)	Neutral	3
Corning Incorporated (GLW)	Neutral	3
Novanta Inc. (NOVT)	Neutral	2
Stoneridge, Inc. (SRI)	Neutral	4
Vicor Corporation (VICR)	Neutral	3
Vishay Precision Group, Inc. (VPG)	Neutral	3

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

Industry Comparison Industry: Electronics - Miscellaneous Components				Industry Peers		
	OLED	X Industry	S&P 500	CAMP	CTS	VICR
Zacks Recommendation (Long Term)	Neutral	-	-	Neutral	Neutral	Neutral
Zacks Rank (Short Term)	2	-	-	3	2	3
VGM Score	F	-	-	A	A	C
Market Cap	10.17 B	485.52 M	29.87 B	485.52 M	1.15 B	4.18 B
# of Analysts	3	2	12	4	1	2
Dividend Yield	0.37%	0.00%	1.35%	0.00%	0.45%	0.00%
Value Score	F	-	-	C	C	D
Cash/Price	0.07	0.10	0.06	0.20	0.09	0.06
EV/EBITDA	803.07	11.81	17.12	21.17	14.51	134.01
PEG F1	1.77	2.25	2.05	2.27	NA	NA
P/B	10.67	2.67	4.07	5.07	2.63	11.28
P/CF	NA	16.02	17.35	14.03	18.08	143.61
P/E F1	53.14	24.19	20.98	27.25	22.17	64.44
P/S TTM	22.57	1.70	3.36	1.45	2.55	12.98
Earnings Yield	1.88%	3.87%	4.69%	3.63%	4.51%	1.55%
Debt/Equity	0.00	0.12	0.66	1.92	0.11	0.00
Cash Flow (\$/share)	-0.39	0.62	6.83	0.98	1.96	0.67
Growth Score	D	-	-	A	A	A
Historical EPS Growth (3-5 Years)	24.70%	2.77%	9.59%	-37.23%	4.22%	0.61%
Projected EPS Growth (F1/F0)	44.88%	36.24%	21.62%	68.33%	42.86%	263.41%
Current Cash Flow Growth	-137.88%	-4.31%	0.99%	-18.79%	-12.89%	18.56%
Historical Cash Flow Growth (3-5 Years)	NA%	8.14%	7.28%	-7.93%	6.00%	26.40%
Current Ratio	5.77	2.58	1.39	2.00	2.31	7.74
Debt/Capital	0.00%	12.49%	41.51%	65.70%	10.29%	0.00%
Net Margin	32.60%	4.53%	11.95%	-16.87%	9.54%	10.79%
Return on Equity	16.39%	9.13%	16.48%	-1.81%	10.79%	10.03%
Sales/Assets	0.36	0.81	0.51	0.73	0.70	0.82
Projected Sales Growth (F1/F0)	29.05%	2.61%	9.54%	-0.56%	0.00%	31.29%
Momentum Score	F	-	-	C	B	D
Daily Price Change	0.71%	0.00%	-0.11%	0.66%	0.08%	0.22%
1-Week Price Change	-5.78%	-3.44%	0.43%	-4.40%	-4.23%	-3.78%
4-Week Price Change	1.85%	0.00%	1.09%	-2.69%	-6.56%	8.42%
12-Week Price Change	-8.89%	-2.09%	6.77%	26.82%	14.23%	12.91%
52-Week Price Change	45.96%	43.65%	39.06%	82.49%	80.65%	39.06%
20-Day Average Volume (Shares)	240,142	49,695	1,889,295	162,919	152,160	96,681
EPS F1 Estimate 1-Week Change	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
EPS F1 Estimate 4-Week Change	0.00%	0.00%	0.01%	0.00%	6.67%	0.00%
EPS F1 Estimate 12-Week Change	5.28%	1.21%	3.54%	100.00%	6.67%	19.20%

Past performance is no guarantee of future results. Please see important disclosures and definitions at the end of this report.

EPS Q1 Estimate Monthly Change	0.00%	:	0.00%	0.00%	:	0.00%	NA	0.00%
Source: Zacks Investment Research								

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	F
Growth Score	D
Momentum Score	F
VGM Score	F

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

Disclosures

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Returns quoted represent past performance which is no guarantee of future results. Investment returns and principal value will fluctuate so that when shares are redeemed, they may be worth more or less than their original cost. Current performance may be higher or lower than the performance shown.

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.

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.

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.

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.