Momentum: C



CBRE Group Inc. (CBRE) Long Term: 6-12 Months Zacks Recommendation: Neutral \$88.81 (As of 06/02/21) (Since: 05/12/21) Prior Recommendation: Outperform Price Target (6-12 Months): \$96.00 Short Term: 1-3 Months Zacks Rank: (1-5) 2-Buy Zacks Style Scores: VGM:C

Summary

Shares of CBRE Group have outperformed the industry it belongs to over the past three months. Despite the pandemic's adverse impact on property leasing and sales, the company's performance in recent quarters reflect the benefits from expanding its resilient business in recent years. CBRE Group is poised for growth on diversification of business across property types, lines of business, geographic markets and client types, along with technology investments, cost-management moves and strong balance sheet position. However, despite vaccine distributions and economic recovery in some part across the world, still high infection caseloads, limited business travel and substantial part of the work force being out of their offices, the operating challenges are likely to continue in the near term. Further, a competitive landscape is concerning.

Data Overview

52-Week High-Low	\$90.21 - \$41.03
20-Day Average Volume (Shares)	1,578,016
Market Cap	\$30.2 B
Year-To-Date Price Change	43.5%
Beta	1.50
Dividend / Dividend Yield	\$0.00 / 0.0%
Industry	Real Estate - Operations
Zacks Industry Rank	Bottom 32% (169 out of 250)

Last EPS Surprise	22.9%
Last Sales Surprise	3.4%
EPS F1 Estimate 4-Week Change	0.0%
Expected Report Date	07/30/2021
Earnings ESP	0.0%
P/E TTM	26.6
P/E F1	23.2
PEG F1	2.1
P/S TTM	1.3

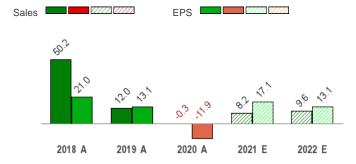
Price, Consensus & Surprise



Value: C

Growth: C

Sales and EPS Growth Rates (Y/Y %)



Sales Estimates (millions of \$)

	Q1	Q2	Q3	Q4	Annual*
2022	6,617 E	6,633 E	6,978 E	8,362 E	28,261 E
2021	5,939 A	5,933 E	6,309 E	7,653 E	25,789 E
2020	5,889 A	5,381 A	5,645 A	6,911 A	23,826 A
EPS Es	stimates				
	Q1	Q2	Q3	Q4	Annual*
2022	\$0.92 E	\$0.83 E	\$0.99 E	\$1.77 E	\$4.33 E
2021	\$0.86 A	\$0.72 E	\$0.87 E	\$1.51 E	\$3.83 E

\$0.73 A

\$1.45 A

\$3.27 A

*Quarterly figures may not add up to annual.

\$0.35 A

\$0.75 A

The data in the charts and tables, including the Zacks Consensus EPS and sales estimates, is as of 06/02/2021. The report's text and the analyst-provided price target are as of 06/03/2021.

2020

Overview

Headquartered in Dallas, TX, CBRE Group, Inc. is a commercial real estate services and investment firm, offering a wide range of services to tenants, owners, lenders and investors in office, retail, industrial, multifamily and other types of commercial real estates in all major metropolitan areas across the globe. The services include facilities, transaction and project management; property management; investment management; appraisal and valuation; property leasing; strategic consulting; property sales; mortgage services and development services. With more than 100,000 employees the company serves clients in more than 100 countries.

CBRE Group reports on three global business segments: Advisory Services, Global Workplace Solutions and Real Estate Investments. However, effective Jan 1, 2021, the company's organizational structure has been realigned.

Advisory Services offers a broad range of services globally. This includes property leasing, property sales, mortgage services, property management, and valuation.

Global Workplace Solutions (GWS) offers an extensive suite of integrated, contractually-based outsourcing services to occupiers of real estate, including facilities management and project management.



Notably, effective Jan 1, 2021, transaction services were completely moved under the Advisory Services segment, while project management was entirely moved under the Global Workplace Solutions segment. Earlier transaction services and project management were divided between the Global Workplace Solutions segment and the Advisory Services segment.

Real Estate Investments includes investment management services provided globally, development services in the United States and the U.K.; and flexible office space solutions.



Zacks Equity Research www.zackspro.com Page 2 of 13

Reasons To Buy:

▲ CBRE Group has a broad range of real estate products and services, and an extensive knowledge of domestic and international real estate markets. The company's market leading position is likely to give it a competitive edge in navigating through the current challenges and capitalize on compelling opportunities. As the largest commercial real estate services and investment firm (based on 2020 revenue), the company enjoys a robust scale. It is among a few companies offering a full suite of services to multinational clients. Moreover, the company has grown organically and banked on strategic in-fill acquisitions to boost its service offerings and geographic reach. With an expanded capability to service, the company's number of large clients has increased significantly over the past years. As large corporations continue to seek consolidation of the number of service providers, CBRE Group is expected to remain a beneficiary of this trend.

CBRE Group's wide real estate products and services offerings, healthy outsourcing business, strategic buyouts, technology investments and solid balance sheet are expected to drive performance.

- ▲ CBRE Group has opted for a better-balanced and more resilient business model and in pursuit of this the company has shifted toward more diversified and contractual revenue base over the past years. This makes the company relatively resilient to market disruptions and positions it well to navigate even amid headwinds. In fact, enhanced resiliency has helped its performance even amid the pandemic. Particularly, though transaction revenues have been soft, broad diversification of both deal sizes and property types has helped the company sail through the challenging environment. Moreover, capital allocation scopes are expected to fuel growth and boost resiliency further. Also, geographical diversity has helped the company tide over muted activity in some markets with solid growth elsewhere.
- ▲ The company's solid technology platform helps it to develop and deliver superior analytical, research and client service tools to meet diverse client needs. In fact, strategic reinvestment in its business, specifically on the technology front, is expected to differentiate CBRE Group from its peers. The company has been spending millions, besides opting for the acquisition of technology solution providers in the commercial real estate market.
- ▲ Moreover, CBRE Group has gained from its cost-cutting efforts and benefited from operational efficiencies. Also, a considerable part of costs of sales in the Advisory business is variable in nature. To temporarily lower costs within its transactional business, the company resorted to furloughs and reduced work schedules as well as some job eliminations. Moreover, in the GWS segment, margin benefited from structural and temporary cost-saving measures. In fact, cost-management efforts are likely to generate considerable incremental benefits in 2021.
- ▲ Further, the company's Global Workplace Solutions segment, which provides a broad suite of integrated, contractually-based services to occupiers of real estate, including facilities management, project management, transaction management and management consulting, is well poised to grow. Occupiers of real estate have been increasingly opting for outsourcing and depending on the expertise of third-party real estate specialists to achieve improvement in execution and efficiency. As a result, CBRE Group has been witnessing continued momentum from both new and existing customers. High-quality client base is bumping up contractual revenues. Encouragingly, facilities management's new business pipeline picked up from the end of 2020, with the reopening of economies and demand from several sectors, including life sciences, technology, manufacturing and professional services. For the GWS segment, management expects revenue to rise in high-single digit range and segment operating growth in mid-to-high teens range in 2021.
- ▲ CBRE Group has banked on strategic in-fill acquisitions to widen its geographic coverage, as well as expand and reinforce service offerings. The company focuses on acquiring regional or specialty firms which complement its existing platform as well as independent affiliates in which, at times, it holds small stakes. Furthermore, the company opts for larger, transformational deals driven by macro policies. In first-quarter 2021, the company acquired a construction management and project advisory services firm based in Los Angeles. Moreover, during 2020, the company completed six in-fill acquisitions: leading local facilities management firms in Spain and Italy, a U.S. firm that helps companies reduce telecommunication costs, a technology-focused project management firm based in Florida, a firm specializing in performing real estate valuations in South Korea, and a facilities management and technical maintenance firm in Australia. Also, during 2019, in addition to the Telford strategic acquisition, the company completed eight in-fill acquisitions. These opportunistic acquisitions and strategic investments will likely serve as growth drivers, supplementing its organic growth. Moreover, the company's investment and partnership with Industrious poises it well to capitalize on the expected high demand for flexible space exiting pandemic.
- ▲ CBRE Group is focused on maintaining solid balance-sheet strength and ample liquidity amid the challenging macroeconomic conditions. The company exited first-quarter 2021 with cash and cash equivalents of \$1.91 billion, marginally up from \$1.9 billion as of Dec 31, 2020. As of Mar 31, 2021, the company had \$4.6 billion of total liquidity. This comprised \$1.8 billion in cash, in addition to the ability to borrow a total of \$2.8 billion under its revolving credit facilities, net of any outstanding letters of credit. The company's net leverage ratio was 0.02x as of the same date. This is significantly below CBRE's primary debt covenant of 4.25x. Additionally, growth is expected to be further boosted by capital deployment focused on sectors and business lines that are poised to benefit considerably from secular growth trends. Also, management noted that there is a strong merger and acquisition pipeline and expect to continue programmatic share repurchases.
- ▲ Shares of CBRE Group have gained 17.5% over the past three months compared with the industry's increase of 5.6%. In addition, the recent trend in earnings estimates revisions for 2021 indicates a favorable outlook for CBRE Group. The Zacks Consensus Estimate for 2021 earnings has been revised 3.5% upward over the past month. Therefore, given the progress on fundamentals and improving estimate revisions, the stock is likely to perform well in the near term.

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

Zacks Equity Research www.zackspro.com Page 3 of 13

Reasons To Sell:

- ▼ The Advisory Services segment, mainly property sales and leasing, has been affected by the pandemic. With several property owners and occupiers having put transactions on hold and withdrawing existing mandates, sales and leasing volumes have sharply declined. Though vaccine distributions and recovery in economic conditions is taking place in certain regions across the world, still high Covid-19 caseloads, limited business travel and face-to-face business dealings as well as with a large chunk of workers remaining out of their offices, the operating challenges are expected to continue in the near term.
- ▼ CBRE Group faces stiff competition from international, regional and local players in the market. Some of these firms enjoy greater financial resources than the company. Also, some of them are larger on a regional or local basis, or have a stronger position in a specific market segment or service offering. This affects the company's ability to do business and crack deals on favorable terms.
- Macroeconomic uncertainty due to the coronavirus pandemic and adverse impact on commercial real estate transactions are key concerns. Also, there is stiff competition from regional and local players.
- ▼ Given its international presence, the company often faces an unfavorable foreign currency movement and uneasiness in some economies, which impact its top-line growth. In addition, though the company's business is geographically diverse, the United States and the U.K. comprise a major part of its global leasing and property sales revenue, making the company's business susceptible to any choppiness in these economies.

Zacks Equity Research www.zackspro.com Page 4 of 13

Last Earnings Report

CBRE Group Q1 Earnings Beat on Resilient Business

CBRE Group reported first-quarter 2021 adjusted earnings per share of 86 cents, handily beating the Zacks Consensus Estimate of 70 cents. Moreover, the figure climbed 14.7% from the 75 cents reported in the year-ago period.

The company generated revenues of \$5.94 billion, outpacing the Zacks Consensus Estimate of \$5.75 billion. The revenue figure also compares favorably with the year-ago quarter's \$5.89 billion. However, net revenues were down 2.1% (4.4% in local currency), year on year, to \$3.36 billion.

Quarter Ending	03/2021
Report Date	Apr 29, 2021
Sales Surprise	3.37%
EPS Surprise	22.86%
Quarterly EPS	0.86
Annual EPS (TTM)	3.39

Nevertheless, adjusted EBITDA climbed 14.1% (11.9% local currency) to \$491 million.

Despite the pandemic's adverse impact on property leasing and sales, quarterly results reflect the benefits from diversifying and expanding its resilient business in recent years.

Bob Sulentic, president & chief executive officer of CBRE noted, "Our performance is being propelled by our long-standing efforts to diversify our business across four key dimensions: property types, lines of business, geographic markets and client types." Also, he attributed the 2020 "reset" of the cost structure for this earnings growth.

Moreover, he pointed that "For full-year 2021, we now expect adjusted earnings per share to meaningfully surpass 2019's peak level, with potential upside from discretionary capital deployment."

Quarter in Detail

The company's Advisory Services segment reported a year-over-year revenue decline of 5.3% (7.3% local currency) to \$1.7 billion. Net revenues decreased 5.3% (7.3% local currency) to \$1.69 billion. Operating profit came in at \$332 million compared with the year-ago period's \$333 million.

Though the pandemic's impact on the company's business eased to some extent, leasing and sales activities were hampered. However, the company benefited from its cost efforts.

Leasing revenue remained choppy, declining 17% (18% local currency), with overall leasing activity being weak in the United States, while International markets were generally more resilient.

There was a rebound in capital markets activity with global property sales revenue slipping 9% (11% local currency), which marks the mildest drop, by far, since the pandemic-induced downturn started in second-quarter 2020, per the company. Particularly, the U.K., India/Southeast Asia/Middle East/Africa, and Pacific display decent growth. However, the United States witnessed a decline in sales revenues, year on year.

Commercial mortgage revenues increased 14% (13% in local currency) from first-quarter 2020, while revenues from loan servicing climbed 22% (20% in local currency) during the quarter. Valuation revenues were up 8% (3% local currency), while property management's net revenues climbed 2%, but dipped 1% in local currency.

The Global Workplace Solutions (GWS) segment registered an increase of 3.6% (1.6% in local currency) in revenues to \$4.03 billion. Net revenues inched up 1.3% (down 1.0% in local currency) to \$1.46 billion. Operating profit increased to \$152 million from the year-ago period's \$107 million. Resilient demand for facilities management, particularly for data centers, combined with cost-saving efforts, fueled operating profit growth. Nonetheless, project management net revenues declined 7% (9% in local currency), underlining lackadaisical demand for projects.

Encouragingly, facilities management's new business pipeline picked up from the end of 2020, with the reopening of economies and demand from several sectors, including life sciences, technology, manufacturing and professional services.

The Real Estate Investments segment recorded a 0.2% (4.0% in local currency) decrease in revenues to \$211 million. Yet, operating profit increased to \$61 million from the year-ago period's \$43 million, mainly on investment management growth.

Investment management revenues climbed 9% (4% in local currency) to \$132.1 million.

At the end of first-quarter 2021, assets under management (AUM) reached a record high for the company and aggregated \$124.5 billion, reflecting an increase of \$1.8 billion (\$3.5 billion local currency) from year-end 2020. This highlights higher asset valuations and net capital inflows, partially offset by adverse foreign-currency movement.

Apart from this, the in-process development portfolio ended first-quarter 2021 at \$15 billion, up \$0.1 billion from year-end 2020, reflecting a record level for the company. The pipeline increased by \$0.7 billion from year-end 2020 to \$6.8 billion.

During the March-end quarter, the company acquired an incremental interest in Industrious, bringing its current ownership stake to 35%. Moreover, it acquired a small project management company based in Los Angeles.

Balance Sheet Position

CBRE Group exited first-quarter 2021 with cash and cash equivalents of \$1.91 billion, marginally up from \$1.9 billion as of Dec 31, 2020.

As of Mar 31, 2021, the company had \$4.6 billion of total liquidity. This comprised \$1.8 billion in cash, in addition to the ability to borrow a total of \$2.8 billion under its revolving credit facilities, net of any outstanding letters of credit. The company's net leverage ratio was 0.02x as of the same date. This is significantly below CBRE's primary debt covenant of 4.25x.

During the March-end quarter, the company repurchased \$64.1 million of its stock. As of Mar 31, 2021, it had \$285.9 million of stock-repurchase capacity.

Outlook

CBRE Group provided qualitative guidance for the year.

In the Advisory business, management expects transaction revenue growth in low-double digit and projects high-single digit growth across rest of Advisory on combined basis.

In the GWS segment, management expects revenue to rise in high-single digit range and segment operating growth in mid-to-high teens range.

In the Real Estate Investments segment, management projects investment management profitability to rise mid-to-high teens and expect profitability growth in excess of 30% from US development business.

Finally, management anticipates 2021 adjusted EPS will meaningfully surpass prior pre-pandemic peak of \$3.71 achieved in 2019, with potential upside from capital allocation activities.

The company also noted that significant capital-allocation agility remains.

Zacks Equity Research www.zackspro.com Page 6 of 13

Recent News

CBRE Retains Global Real Estate Investment Sales Activity Top Spot - Mar 18, 2021

CBRE Group announced that it has once again secured the top spot in the global rankings for commercial real estate investment sales for 2020. The data is as per Real Capital Analytics (RCA).

This, in fact, is the 10th consecutive year of the company securing the first position. Per the RCA data, CBRE had 24.2% market share in 2020 across all property types on a global basis, which is a massive 860 basis points ahead of its closest competitor. Apart from being number one globally, CBRE held the top spot for commercial real estate investment sales in the Americas, Asia Pacific, and Europe, Middle East & Africa (EMEA).

In 2020, CBRE was again the top global firm in logistics and industrial sales, with a market share of 30%. The company was number one for global apartment sales with a market leading share of 22.8%. In addition, CBRE claimed the top global position in retail sales, with a market share of 23.2% and was the leading global office sales as seller representative, with an industry-leading market share of 22.7%.

Valuation

CBRE Group's shares have been up 78.5% over the trailing 12-month period. Stocks in the Zacks sub-industry have gained 59.2%, while the Zacks Finance sector increased 42.2% over the past year.

The S&P 500 Index is up 37.4% over the past year.

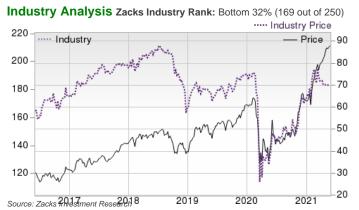
The stock is currently trading at 22.29X forward 12-month earnings, which compares to 30.28X for the Zacks sub-industry, 17.07X for the Zacks sector and 21.78X for the S&P 500 Index.

Over the past five years, the stock has traded as high as 23.08X and as low as 7.35X, with a 5-year median of 14.31X. Our neutral recommendation indicates that the stock will perform in line with the market. Our \$96 price target reflects 23.77X earnings.

The table below shows summary valuation data for CBRE.

Valuation Multiples - CBRE						
		Stock S	Sub-Industry	Sector	S&P 500	
	Current	22.29	30.28	17.07	21.78	
P/E F 12M	5-Year High	23.08	34.16	17.24	23.83	
	5-Year Low	7.35	11.76	11.60	15.30	
	5-Year Median	14.31	16.19	14.92	18.03	
	Current	1.13	3.47	8.30	4.70	
P/S F12M	5-Year High	1.13	4.41	8.30	4.74	
	5-Year Low	0.38	2.13	5.08	3.21	
	5-Year Median	0.75	3.06	6.20	3.72	
	Current	4.16	0.71	3.40	6.99	
P/B TTM	5-Year High	4.16	0.84	3.40	7.03	
	5-Year Low	1.59	0.28	1.77	3.83	
	5-Year Median	3.36	0.62	2.64	5.01	

Zacks Equity Research www.zackspro.com Page 7 of 13



Top Peers

Company (Ticker)	Rec Rank
Jones Lang LaSalle Incorporated (JLL)	Outperform 2
Cushman & Wakefield PLC (CWK)	Neutral 3
FirstService Corporation (FSV)	Neutral 2
Marcus & Millichap, Inc. (MMI)	Neutral 2
Newmark Group, Inc. (NMRK)	Neutral 3
The RMR Group Inc. (RMR)	Neutral 3
Walker & Dunlop, Inc. (WD)	Neutral 3
Colliers International Group Inc. (CIGI)	Underperform 5

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

Industry Comparison Industry: Real Estate - Operations			Industry Peers			
	CBRE	X Industry	S&P 500	CIGI	CWK	JLL
Zacks Recommendation (Long Term)	Neutral	-	-	Underperform	Neutral	Outperform
Zacks Rank (Short Term)	2	-	-	5	3	2
VGM Score	С	-	-	D	С	С
Market Cap	30.21 B	751.28 M	30.48 B	4.88 B	4.31 B	10.58 B
# of Analysts	4	2	12	2	4	4
Dividend Yield	0.00%	0.00%	1.29%	0.09%	0.00%	0.00%
Value Score	C	-	-	C	C	C
Cash/Price	0.07	0.15	0.06	0.03	0.24	0.04
EV/EBITDA	17.57	11.89	17.46	18.66	17.21	12.42
PEG F1	2.11	2.01	2.16	NA	1.70	1.87
P/B	4.16	1.36	4.19	8.16	3.89	1.85
P/CF	16.96	12.80	17.54	26.33	25.01	13.02
P/E F1	23.19	21.31	21.67	23.16	16.99	16.83
P/S TTM	1.27	3.57	3.51	1.67	0.55	0.64
Earnings Yield	4.26%	4.36%	4.49%	4.32%	5.90%	5.94%
Debt/Equity	0.25	0.21	0.66	1.23	2.92	0.18
Cash Flow (\$/share)	5.31	0.45	6.82	4.35	0.77	15.83
Growth Score	С	-	-	D	С	F
Historical EPS Growth (3-5 Years)	11.00%	7.18%	9.39%	-9.52%	NA	8.70%
Projected EPS Growth (F1/F0)	17.13%	29.31%	21.04%	18.42%	40.43%	29.52%
Current Cash Flow Growth	-1.11%	-24.28%	0.74%	-11.43%	-59.14%	-16.95%
Historical Cash Flow Growth (3-5 Years)	11.89%	12.85%	7.32%	14.04%	20.65%	6.45%
Current Ratio	1.37	1.83	1.39	0.93	1.37	2.17
Debt/Capital	23.49%	21.69%	41.55%	66.31%	74.48%	15.34%
Net Margin	3.54%	3.52%	11.92%	1.67%	-2.32%	3.03%
Return on Equity	16.81%	3.59%	16.34%	8.84%	-17.07%	10.66%
Sales/Assets	1.42	0.13	0.51	0.93	1.10	1.22
Projected Sales Growth (F1/F0)	8.24%	0.00%	9.37%	21.29%	3.82%	3.03%
Momentum Score	С	-	-	F	Α	Α
Daily Price Change	0.39%	0.00%	0.06%	2.30%	-0.10%	0.60%
1-Week Price Change	0.69%	1.11%	1.01%	1.84%	2.42%	-2.24%
4-Week Price Change	5.94%	0.67%	1.16%	-1.54%	10.27%	9.68%
12-Week Price Change	17.18%	5.17%	9.34%	11.53%	15.27%	18.43%
52-Week Price Change	81.84%	31.37%	37.13%	86.39%	55.76%	80.11%
20-Day Average Volume (Shares)	1,578,016	20,385	1,831,507	70,898	825,966	342,663
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%	0.16%	-18.20%	200.00%	16.22%
EPS F1 Estimate 12-Week Change	3.65%	0.00%	3.26%	-18.20%	12.50%	16.22%
EPS Q1 Estimate Monthly Change	0.00%	0.00%	0.00%	-93.75%	21.21%	51.94%

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.



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

Disclosures

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

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

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

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

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

No part of this report can be reprinted, republished or transmitted electronically without the prior written authorization of ZIR.

Zacks Equity Research www.zackspro.com Page 9 of 13

Additional Disclosure

This material represents an assessment of the market and economic environment at a specific point in time and is not intended to be a forecast of future events, or a guarantee of future results. Forward-looking statements are subject to certain risks and uncertainties. Any statements that refer to expectations, projections or characterizations of future events or circumstances, including any underlying assumptions, are forwardlooking statements. Actual results, performance, or achievements may differ materially from those expressed or implied.

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 mediumterm 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 4week 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 longterm 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 mostrecent 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.

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

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 longterm 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.

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

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.

Zacks Equity Research www.zackspro.com Page 12 of 13

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.

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