August 12, 2024

Zacks Small-Cap Research

Sponsored – Impartial - Comprehensive

Brian Lantier
312-265-9153
blantier@zacks.com

scr.zacks.com
10 S. Riverside Plaza, Chicago, IL 60606

CBAK Energy Technology (CBAT-NASDAQ)

CBAT: Weathering the challenges in the battery cell market. Maintaining a $2.50/share target.

We are using a fairly conservative margin forecast for the balance of 2024 and 2025. We believe CBAT could be worth $2.50 per share based on our forecasts but upside remains if the company successfully enters new markets or secures outside investments for the raw materials or sodium-ion battery businesses.

Current Price (08/09/24)	$1.01
Valuation	**$2.50**

OUTLOOK

CBAK Energy Technology continues to leverage its strong relationships with portable energy and home energy storage manufacturers to deliver solid results.

Pricing pressures remain in the broader battery cell market but CBAK's margins remained strong in Q2. The company recorded another profitable quarter and we think investor confidence in the company should continue to grow despite quarter-to-quarter fluctuations.

We think investors are taking a "wait and see" approach with regards to CBAK's shares but we believe that the next 18-24 months could mark a period of substantial growth for CBAK as the company enters new markets, expands its product lines, and works to secure funding.

SUMMARY DATA

52-Week High	**$2.08**
52-Week Low	**$0.78**
One-Year Return (%)	**-16%**
Beta	**1.95**
Average Daily Volume (sh)	**239,207**
Shares Outstanding (mil)	**90**
Market Capitalization ($mil)	**$91**
Short Interest Ratio (days)	**N/A**
Institutional Ownership (%)	**1**
Insider Ownership (%)	**13**
Annual Cash Dividend	**$0.00**
Dividend Yield (%)	**0.00**
5-Yr. Historical Growth Rates	
Sales (%)	**82.2**
Earnings Per Share (%)	**N/A**
Dividend (%)	**N/A**
P/E using TTM EPS	**5.3x**
P/E using 2024 Estimate	**3.3x**
P/E using 2025 Estimate	**3.1x**
Zacks Rank	**N/A**

Risk Level	**Above Average**
Type of Stock	**Speculative**
Industry	**Energy Storage**

ZACKS ESTIMATES

Revenue
(in millions of $)

	Q1 (Mar)	Q2 (Jun)	Q3 (Sep)	Q4 (Dec)	Year (Dec)
2022	80 A	56 A	58 A	54 A	249 A
2023	42 A	42 A	63 A	56 A	204 A
2024	59 A	48 A	58 E	57 E	222 E
2025	65 E	61 E	67 E	64 E	256 E

Price/Sales Ratio (Industry = 2.5x)

	Q1 (Mar)	Q2 (Jun)	Q3 (Sep)	Q4 (Dec)	Year (Dec)
2022	-$0.01 A	-$0.02 A	$0.00 A	-$0.06 A	-$0.10 A
2023	-$0.02 A	-$0.03 A	$0.07 A	-$0.04 A	-$0.03 A
2024	$0.11 A	$0.07 A	$0.07 E	$0.06 E	$0.31 E
2025	$0.09 E	$0.08 E	$0.09 E	$0.08 E	$0.33 E

Zacks Projected EPS Growth Rate - Next 5 Years % **N/A**

*Quarterly EPS may not add up to annual EPS due to rounding

© Copyright 2024, Zacks Investment Research. All Rights Reserved.

WHAT'S NEW

CBAK Energy Reports 2nd Quarter Results

On Friday, August 9th, CBAK Energy Technology released its second quarter results which were mixed relative to our expectations. The second quarter results included the following highlights:

- Battery revenues of $35.6 million were sharply below our estimate of $45.8 million but still up 60% versus the second quarter of 2023. We believe that there is still some lumpiness to the battery cell business given the large orders from a handful of the company's key customers. We continue to believe that the company's focus on energy storage is helping it avoid the margin compression that is plaguing the much larger EV battery space.

- The company was able to control operating costs and recognized a few non-recurring items as income in the quarter which enabled CBAK to report second-quarter earnings in line with our estimate of $0.07/share. We estimate that if the non-recurring items were excluded from the income statement the company would have likely reported core recurring earnings of $0.06/share for the second quarter.

- We think investors should focus less on the quarterly fluctuations in revenues and earnings and instead recognize that CBAK has become a sizeable battery cell manufacturer with battery revenues expected to grow to over $200 million in 2025 and gross margins in the battery business above 20%.

- We are adjusting our forecasts slightly to account for a potential transition as the company introduces a new battery size (see below) and our full-year EPS forecasts are now $0.31/share in 2024 and $0.33/share in 2025 but we think the company could significantly outperform these estimates. Trading at just 3 times 2024 eps estimates, CBAK represents a good value for energy storage sector investors with longer time horizons.

Balance Sheet: CBAK Energy improved its cash position during the quarter as orders were fulfilled with cash balances rising to nearly $10 million. The company's current liabilities remain very high at nearly $145 million but we believe that the short-term debt will be converted into long-term debt or potentially paid off after any new financing. The company's Sodium-Ion business and Raw Materials business are both primed for outside investment as well which could potentially improve the company's financial condition.

Updates/Potential Catalysts

40135: As the energy storage market evolves it is clear that the end consumers of storage systems are seeking larger systems with increased capacity for energy storage. We believe that as industrial energy storage begins to become a more commonplace piece of an enterprise's overall energy plan, demand for battery cells with greater capacity and energy density will increase.

The two-wheel and three-wheel scooter/e-bike market is also moving toward batteries that offer greater capacity as the users can then travel longer and further on a single charge. As a reminder much of the company's business to date has been derived from the sale of 26650 and 32140 cylindrical batteries (26mm diameter by 65mm in length and 32mm diameter by 140mm in length).

The company indicated on its conference call that it has finalized the design and testing of a new 40135 (a larger diameter battery – 40mm diameter by 140mm in length) and they have ordered the manufacturing equipment to begin production.

While it will take some time to incorporate batteries of this size into finished products, we believe that the demand is clearly there in the marketplace for battery cells of this size that offer greater capacity and energy density so the company's key customers may begin designing products around this new battery cell format soon. We expect that news on deliveries or orders of this battery cell format could be a catalyst for the shares.

The Indian LEV market: The company continues to explore options for tapping into the Indian LEV (scooters/e-bike) market which includes direct sales to battery and vehicle manufacturers as well as a potential licensing of the company's manufacturing technology to a battery cell manufacturer in India. With more than 200 million scooters on the road (mostly operating gas engines), the market seems ripe for conversion to electric technology particularly as India invests in its power generation capacity (increasing another 6.8% in 2023 to 430 GW as of January 2024).[1] A recent study by Mckinsey found that almost 90% of India scooter users would consider an electric motor on their next scooter purchase.[2] Obviously, given the size of this market opportunity we assume that every major cell manufacturer has their eyes on the Indian LEV market but we think that CBAK's strength in producing cylindrical cells and the introduction of new larger cells with greater capacity could improve the odds that CBAK plays a role in the electrification of the scooter market in India. Any contract wins announced in this market could be a major catalyst for the stock in the second half of 2024.

Fast charging 32140 cell: In June the company announced a new battery design based on the existing 32140 cell format that enables a full charge in just 35 minutes as compared to 75 minutes for the standard 32140 cell. CBAK also indicated that despite the faster charging rate, this battery's cycle life also doubled according to a company press release. The company has filed a patent in China for this technology and expects that it could begin production in the second half of the year. While rapid charging is not vital in the home energy storage market, we do think that this could be a point of differentiation in the market for LEVs throughout Asia.

Sodium Batteries / Raw Materials (HiTrans division): The company has been highlighting outside investor interest in the company's Sodium-Ion battery technology on the past few earnings calls and it was curious that there was no mention of this division on the latest earnings call. Also, the company continues to review options for the HiTrans raw materials business which is no longer viewed as strategically important in our opinion and thus, could be fully divested. Any news regarding an outside investment in the Sodium-Ion battery business or the partial or full divestiture of the HiTrans business could be a catalyst for the shares of CBAK Technology.

KEY POINTS

➢ CBAK Energy Technology (NASDAQ: CBAT) is an integrated lithium-ion battery company with manufacturing and raw materials divisions in China. The company operates manufacturing facilities in Dalian (a port city in Liaoning Province) and Nanjing (the capital of Jiangsu Province) with ambitious plans to expand production through 2027. The company is in the initial stages of expanding its Nanjing facility which will add up to 18 GWh of capacity when all construction is completed. The company has begun the interior work on the first phase of this project which could add up to 6GWh of capacity when completed.

➢ Demand for energy storage has ramped significantly in recent years and as industrial and grid storage needs emerge demand should accelerate further. The company appears to be establishing itself as a strong player in the market for large cylindrical cells. Today much of the company's production is 26-series cells but we anticipate that could shift to larger 40-series cells with higher energy density when production begins in late 2024/early 2025.

➢ The lithium-ion battery market is almost entirely dominated by large Asian (principally Chinese) manufacturers today. Most of these companies are focused on providing battery packs to the EV market which creates an opportunity for cylindrical cells in the energy storage market where CBAK is focusing its efforts. Pricing pressure remains intense in the EV battery market as companies vie for market share but those price wars have not impacted CBAK as the company has remained focused principally on cylindrical cells for the energy storage market.

➢ As we noted in our initiation in August 2023, the acquisition of the Hitrans raw material business significantly impacted results in 2022 when soaring prices for raw materials boosted the company's top line significantly. Pricing has softened sharply since 2022 and the company may seek strategic alternatives for this business so that investors can focus on CBAK being a pure battery manufacturing story.

➢ We are maintaining our target at $2.50/share for CBAK based on a blended valuation of our 2024 revenue forecast for the battery business and our EPS estimate of $0.31/share for 2024.

RISKS

- The PRC government exerts substantial influence over a wide variety of issues related to the company's business. Since the company is based in the US with China-based operating subsidiaries, there are several issues related to the government's oversight that could result in a material adverse change in the company's operations and subsequently, the value of CBAK's common stock. In addition, it should be noted that rules and regulations in China can change quickly with little advance notice.

- The company's independent auditors have expressed substantial doubt about its ability to continue as a going concern. The company is working with its banks and lenders to ensure that they will have access to credit but improving the company's profitability will be an important step toward resolving this issue.

- The competitive landscape for lithium batteries is intense and many of the company's competitors are in much stronger financial positions. In the long run, the company will also face increased competition from new facilities that are expected to be built in North America and the EU.

- The company's customer concentration remains very high and the loss of any significant customer could impact the company's financial stability. In 2022, roughly 70% of revenues were derived from the company's five largest customers. In the battery business, customer concentration could be even higher. The acquisition of Viessmann by Carrier presents an opportunity and a risk given the proportion of battery sales Viessmann represents.

- The company indicated that it identified a material weakness in its internal control over financial reporting. Management believes that the company did not have appropriate policies and procedures in place to evaluate proper accounting and disclosures of key documents and agreements, and there was insufficient accounting personnel with an appropriate level of technical accounting knowledge. The company has implemented additional training to address this issue but it remains a risk. As noted in recent news, the company elected to change its auditor in July 2023 and we will see if this leads to improved internal financial controls.

VALUATION

CBAK continues to make slow progress in changing investor perception as the company posted its second consecutive quarter with positive EPS and margins in the battery business have remained very strong.

We have adjusted our assumption for battery sales for 2024 and 2025, but the company's strong margins in its core products means that our EPS estimates are little changed at $0.31 for 2024 and $0.33 for 2025.

Based on comparable valuations of public battery companies and the strong growth and profitability of the battery business we are maintaining our target valuation to $2.50/share or roughly 8 times our current 2024 EPS estimate of $0.31/share.

If the company successfully attracts outside investments into either its sodium-ion battery business or Hitrans, or if material orders emerge for the new fast-charging 32140 cell or the new 40135 cell, it could materially impact our valuation target.

1 https://www.ibef.org/industry/power-sector-india

2 https://www.mckinsey.com/industries/automotive-and-assembly/our-insights/inside-indian-consumers-embrace-of-electric-two-wheelers

PROJECTED INCOME STATEMENT

CBAK Energy Technology t

8/12/24

(USD in 000's; December Year-End)	2022A	2023A	Mar 1Q24a	June 2Q24A	Sept 3Q24E	Dec 4Q24E	2024E	Mar 1Q25E	June 2Q25E	Sept 3Q25E	Dec 4Q25E	2025E
Battery Revenues												
Uninterruptible supplies	83,604.0	89,610.5	42,847.4	33,573.4	43,645.4	41,463.1	161,529.4	48,926.5	44,523.1	49,865.9	46,874.0	190,189.5
Light Electric Vehicles	6,413.8	4,626.3	1,510.3	1,825.5	2,008.1	2,811.3	8,155.1	3,092.4	3,401.6	3,741.8	4,116.0	14,351.8
Electric Vehicles	4,695.3	2,436.1	480.2	199.3	215.2	232.4	1,127.1	267.3	307.4	338.1	371.9	1,284.7
Total Battery Revenues	94,713.1	96,672.9	44,837.9	35,598.2	45,868.7	44,506.8	170,811.5	52,286.2	48,232.1	53,945.8	51,361.8	205,826.0
Battery Revenues % change (yoy)		2.1%	51.5%									
Raw Material Revenues												
Precursor	78,680.0		-	-	-	-	-	-	-	-	-	-
Cathode	75,331.0		-	-	-	-	-	-	-	-	-	-
Total Raw Material Revenues	154,011.0	107,765.5	13,984.6	12,194.8	12,255.8	12,317.1	50,752.3	12,440.3	12,564.7	12,690.3	12,817.2	50,512.5
Sales	**248,725.8**	**204,438.4**	58,822.4	47,793.0	58,124.5	56,823.9	**221,563.8**	64,726.5	60,796.8	66,636.1	64,179.1	**256,338.5**
% change (yoy)	**372%**	**-18%**	39%	13%	-1%	-7%	**8%**	10%	27%	15%	13%	**16%**
Cost of Revenues	230,630	172,714	40,041	35,065	43,623	42,965	161,694	48,231	45,555	49,620	47,961	191,368
Gross Profit	18,096	31,724	18,781	12,728	14,502	13,859	59,870	16,496	15,242	17,016	16,218	64,971
% change (yoy)							89%					9%
Gross Profit Margin	**7.3%**	**15.5%**	**31.9%**	**26.6%**	**24.9%**	**24.4%**	**27.0%**	**25.5%**	**25.1%**	**25.5%**	**25.3%**	**25.3%**
Operating Expenses:												
Research and Development	10,635	11,928	2,816	2,956	3,103	3,165	12,040	3,102	2,947	3,094	3,156	12,299
Sales and marketing	2,008	4,904	1,724	1,368	1,436	1,587	6,116	1,651	1,733	1,820	1,911	7,115
General and Administrative	9,738	13,789	4,093	3,130	3,756	3,380	14,359	3,414	3,448	3,552	3,641	14,055
	22,381	30,621	8,632	7,454	8,296	8,133	32,514	8,167	8,129	8,466	8,708	33,469
% of Sales	9.0%	15.0%	14.7%	15.6%	14.3%	14.3%	14.7%	12.6%	13.4%	12.7%	13.6%	13.1%
Operating Income (Loss)	**(4,285)**	**1,103**	**10,149**	**5,275**	**6,206**	**5,726**	**27,355**	**8,329**	**7,113**	**8,550**	**7,510**	**31,502**
Impairment Charge on PPE & goodwill	**6,388**	**(7,070)**										
(Provision for) recovery of doubtful accounts	(831)	(1,285)	114	673			787					
Other Income, net	(7,252)	(3,023)	367	188	0	0	555	0	0	0	0	-
Finance Expenses/(Income)	(491)	(433)	(10)	(689)	0	0	(698)	0	0	0	0	(1,387)
Changes in fair value of warrants liability	5,710	136	0	0	0	0	-	0	0	0	0	0
Impairment of non-marketable equity securities	0	(2,393)	0	0	0	0	0	0	0	0	0	0
Income before Taxes	**(12,556)**	**(6,053)**	**10,621**	**6,824**	**6,206**	**5,726**	**29,396**	**8,329**	**7,113**	**8,550**	**7,510**	**30,115**
Loss (income) attributable to non-controlling interests	1,879	6,090	264	422	443	456	1,585	470	494	508	524	1,996
Income tax (expense)/credit	1,228	(2,486)	(1,049)	(801)	(496)	(458)	(2,804)	(666)	(569)	(684)	(601)	(2,520)
Net Income (Loss) attributable to CBAK	**(9,448)**	**(2,449)**	**9,836**	**6,445**	**6,153**	**5,724**	**28,178**	**8,132**	**7,038**	**8,374**	**7,433**	**29,590**
EPS reported	**(0.11)**	**(0.03)**	**0.11**	**0.07**	**0.07**	**0.06**	**0.31**	**0.09**	**0.08**	**0.09**	**0.08**	**0.33**
% change (yoy)	**N/A**	**N/A**	N/A	N/A	N/A	N/A	**N/A**	N/A	N/A	N/A	N/A	**N/A**
Diluted Shares (weighted average)	**88927.0**	**89252.0**	90098.8	90111.2	90156.3	90201.3	**90141.9**	90381.7	90562.5	90743.6	90925.1	**90653.2**
Margins:												
Gross Margin	**7.3%**	**15.5%**	31.9%	26.6%	24.9%	24.4%	**27.0%**	25.5%	25.1%	25.5%	25.3%	**25.3%**
Research and Development as a % of Sales	4.3%	5.8%	4.8%	6.2%	5.3%	5.6%	5.4%	4.8%	4.8%	4.6%	4.9%	4.8%
General & Administractive as a % of Sales	3.9%	6.7%	7.0%	6.5%	6.5%	5.9%	6.5%	5.3%	5.7%	5.3%	5.7%	5.5%

Source: Zacks SCR, Brian Lantier, Company Filings

© Copyright 2024, Zacks Investment Research. All Rights Reserved.

BALANCE SHEET

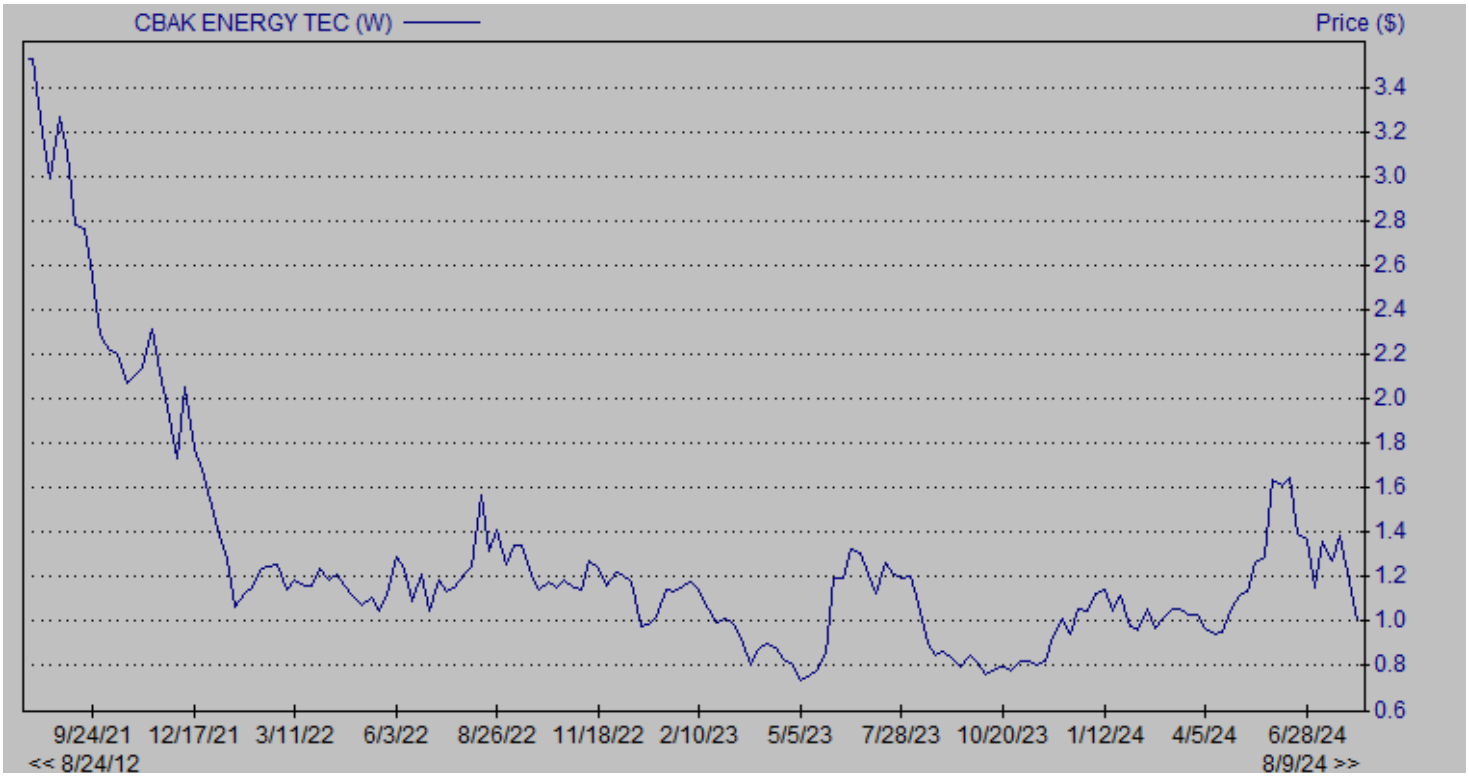
CBAK Energy Technology, Inc.
Balance Sheet in US Dollars
6/30/24

(US Dollars USD in 000s)	
Assets	
Current Assets	
Cash and Cash Equivalents	9,709
Pledged Deposits	10,419
Term Deposits	34,343
Trade and bills receivable, net	32,711
Inventories	31,227
Prepayment & other receivables	5,018
Receivables from a former subsidiary, net	13
Income Tax recoverable	0
Total current assets	123,439
Property, plant & tquipment (net)	86,966
Construction in progress	36,087
Long-term investments, net	2,256
Prepaid land use rights	11,281
Intangible Assets (net)	599
Deposit paid for acquisition - long-term investment	15,934
Operating lease right-of-use assets, net	3,054
Deferred tax assets, net	0
Total Assets	**279,617**
Liabilities	
Current Liabilities	
Trade and bills payable	71,644
Short-term bank borrowings	35,077
Other short-term loans	339
Accrued expenses and other payables	33,432
Payables to a former subsidiary, net	418
Deferred government grants, current	483
Product warranty provisions	18
Income Tax Payable	799
Operating lease liability, current	995
Finance lease liability, current	1,425
Total current liabilities	144,629
Deferred government grants, non-current	5,700
Product warranty provisions	435
Operating lease liability, non-current	2,326
Accrued expenses & other payables, non-current	0
Total Liabilities	**153,090**
Shareholder's Equity	
Common stock	90
Donated shares	14,102
Additional Paid-in Capital	247,675
Statutory reserves	1,231
Accumulated Deficit	(118,114)
Accumulated Other Comprehensive Loss	(14,326)
Shareholder's Equity	**130,656**
Less: Treasury Shares	(4,067)
Total shareholders' equity	**126,590**
Non-controlling interests	(63)
Total equity	**126,526**
Total Liabilities & Equity	**279,617**

Source: Company Press Release

© Copyright 2024, Zacks Investment Research. All Rights Reserved.

HISTORICAL STOCK PRICE



DISCLOSURES

The following disclosures relate to relationships between Zacks Small-Cap Research ("Zacks SCR"), a division of Zacks Investment Research ("ZIR"), and the issuers covered by the Zacks SCR Analysts in the Small-Cap Universe.

ANALYST DISCLOSURES

I, Brian Lantier, hereby certify that the view expressed in this research report accurately reflect my personal views about the subject securities and issuers. I also certify that no part of my compensation was, is, or will be, directly or indirectly, related to the recommendations or views expressed in this research report. I believe the information used for the creation of this report has been obtained from sources I considered to be reliable, but I can neither guarantee nor represent the completeness or accuracy of the information herewith. Such information and the opinions expressed are subject to change without notice.

INVESTMENT BANKING AND FEES FOR SERVICES

Zacks SCR does not provide investment banking services nor has it received compensation for investment banking services from the issuers of the securities covered in this report or article.
Zacks SCR has received compensation from the issuer directly, from an investment manager, or from an investor relations consulting firm engaged by the issuer for providing non-investment banking services to this issuer and expects to receive additional compensation for such non-investment banking services provided to this issuer. The non-investment banking services provided to the issuer includes the preparation of this report, investor relations services, investment software, financial database analysis, organization of non-deal road shows, and attendance fees for conferences sponsored or co-sponsored by Zacks SCR. The fees for these services vary on a per-client basis and are subject to the number and types of services contracted. Fees typically range between ten thousand and fifty thousand dollars per annum. Details of fees paid by this issuer are available upon request.

POLICY DISCLOSURES

This report provides an objective valuation of the issuer today and expected valuations of the issuer at various future dates based on applying standard investment valuation methodologies to the revenue and EPS forecasts made by the SCR Analyst of the issuer's business.
SCR Analysts are restricted from holding or trading securities in the issuers that they cover. ZIR and Zacks SCR do not make a market in any security followed by SCR nor do they act as dealers in these securities. Each Zacks SCR Analyst has full discretion over the valuation of the issuer included in this report based on his or her own due diligence. SCR Analysts are paid based on the number of companies they cover. SCR Analyst compensation is not, was not, nor will be, directly or indirectly, related to the specific valuations or views expressed in any report or article.

ADDITIONAL INFORMATION

Additional information is available upon request. Zacks SCR reports and articles are based on data obtained from sources that it believes to be reliable, but are not guaranteed to be accurate nor do they purport to be complete. Because of individual financial or investment objectives and/or financial circumstances, this report or article should not be construed as advice designed to meet the particular investment needs of any investor. Investing involves risk. Any opinions expressed by Zacks SCR Analysts are subject to change without notice. Reports or articles or tweets are not to be construed as an offer or solicitation of an offer to buy or sell the securities herein mentioned.

CANADIAN COVERAGE

This research report is a product of Zacks SCR and prepared by a research analyst who is employed by or is a consultant to Zacks SCR. The research analyst preparing the research report is resident outside of Canada, and is not an associated person of any Canadian registered adviser and/or dealer. Therefore, the analyst is not subject to supervision by a Canadian registered adviser and/or dealer, and is not required to satisfy the regulatory licensing requirements of any Canadian provincial securities regulators, the Investment Industry Regulatory Organization of Canada and is not required to otherwise comply with Canadian rules or regulations.